

## **APPENDIX D**

### **WDOE Wetland Rating Forms**

Wetland name or number: Burke Gilman Wetland #1

## WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland Burke Gilman Wetland #1 Date of site visit August 23, 2007

Rated by Jenni Creveling Trained by Ecology? Yes ☒ No ☐ Date of Training 4/06

SEC: 10 TWSHP: 26N RGE: 04E Is S/T/R in Appendix D Yes ☐ No ☒

Map of wetland unit: Figure 1 Estimated Size \_\_\_\_\_

### SUMMARY OF RATING

#### Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☐ IV ☒

Category I = Score >70  
Category II = Score 51-69  
Category III = Score 30-50  
Category IV = Score < 30

Score for Water Quality Functions

10

Score for Hydrologic Functions

5

Score for Habitat Functions

9

TOTAL score for functions

24

#### Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the “highest” category from above)

IV

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class	
Estuarine	Depressional	X
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above	Check if unit has multiple HGM classes present	<input type="checkbox"/>

**Does the wetland unit being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	<u>YES</u>	<u>NO</u>
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered <b>animal</b> or <b>plant</b> species (T/E species)?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.</u>		<u>X</u>
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered <b>animal</b> species?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).</u>		<u>X</u>
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		<u>X</u>
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

## Classification of Wetland Units in Western Washington

**If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.**

**1.** Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ **NO** – go to 2

☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. ).

**2.** The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ **NO** – go to 3

☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

**3.** Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒ **NO** – go to 4

☐ **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

**4.** Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

*NOTE: Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ **NO** – go to 5

☐ **YES** – The wetland class is **Slope**

**5.** Does the entire wetland unit **meet all** of the following criteria?

Wetland name or number: Burke Gilman Wetland #1

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

*NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.*

☒ **NO - go to 6** ☐ **YES – The wetland class is *Riverine***

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7

☒ **YES – The wetland class is **Depressional****

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8

☐ **YES – The wetland class is **Depressional****

**8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.**

<i>HGM classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
<b>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality</b>		
D	<b>D 1. Does the wetland have the potential to improve water quality?</b>	(see p. 38)
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet)..... points = 3 Unit has an intermittently flowing, or highly constricted permanently flowing outlet.... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	Figure 1 2
D	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic ( <i>use NRCS definitions</i> ). YES points = 4 NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): Wetland has persistent, ungrazed, vegetation >= 95% of area ..... points = 5 Wetland has persistent, ungrazed, vegetation >= 1/2 of area ..... points = 3 Wetland has persistent, ungrazed vegetation >= 1/10 of area ..... points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area..... points = 0 Map of Cowardin vegetation classes	Figure 2 1
D	D1.4 Characteristics of seasonal ponding or inundation. <i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i> Area seasonally ponded is > 1/2 total area of wetland..... points = 4 Area seasonally ponded is > 1/4 total area of wetland..... points = 2 Area seasonally ponded is < 1/4 total area of wetland..... points = 0 NOTE: See text for indicators of seasonal and permanent inundation. Map of hydroperiods	Figure 3 2
D	<b>Total for D 1</b> <i>Add the points in the boxes above</i>	5
D	<b>D 2. Does the wetland unit have the opportunity to improve water quality?</b> Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i> <input type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen <input type="checkbox"/> Other _____ <b>YES</b> multiply score in D 1. <b>by 2</b> <b>NO</b> multiply score in D 1. <b>by 1</b>	(see p. 44) multiplier 2
D	<b>TOTAL - Water Quality Functions</b> Multiply the score from D1 by D2 <i>Add score to table on p. 1</i>	10

HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation (see p. 46)		
<b>D</b>	<b>D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?</b> D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet)..... points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> )... points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> )... points = 0	2
<b>D</b>	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).</i> Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7 The wetland is a "headwater" wetland" ..... points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet ..... points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1 Marks of ponding less than 0.5 ft..... points = 0	0
<b>D</b>	D 3.3 Contribution of wetland unit to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit ..... points = 5 The area of the basin is 10 to 100 times the area of the unit ..... points = 3 The area of the basin is more than 100 times the area of the unit ..... points = 0 Entire unit is in the FLATS class ..... points = 5	3
<b>D</b>	<b>Total for D 3</b> <i>Add the points in the boxes above</i>	5
<b>D</b>	<b>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</b> (see p. 48) Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. <i>Note which of the following conditions apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ <input type="checkbox"/> YES multiplier is 2 <input checked="" type="checkbox"/> NO multiplier is 1	multiplier 1
<b>D</b>	<b>TOTAL - Hydrologic Functions</b> Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	5

**HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat****H 1. Does the wetland have the potential to provide habitat for many species?****H 1.1 Vegetation structure (see p. 68)**

Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or 1/4 acre.

- ☐ Aquatic bed  
☒ Emergent plants  
☐ Scrub/shrub (areas where shrubs have >30% cover)  
☐ Forested (areas where trees have >30% cover)  
☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)

Add the number of vegetation types that qualify. If you have:

4 types or more ..... points = 4  
 3 types ..... points = 2  
 2 types ..... points = 1  
 1 type ..... points = 0

0

**H 1.2. Hydroperiods (see p. 69)**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or 1/4 acre to count. (see text for descriptions of hydroperiods)

- ☐ Permanently flooded or inundated  
☐ Seasonally flooded or inundated  
☒ Occasionally flooded or inundated  
☒ Saturated only  
☐ Permanently flowing stream or river in, or adjacent to, the wetland  
☐ Seasonally flowing stream in, or adjacent to, the wetland  
☐ **Lake-fringe wetland = 2 points**  
☐ **Freshwater tidal wetland = 2 points**

4 or more types present ..... points = 3  
 3 types present ..... points = 2  
 2 types present ..... points = 1

1

**H 1.3. Richness of Plant Species (see p. 71)**

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

If you counted: > 19 species ..... points = 2

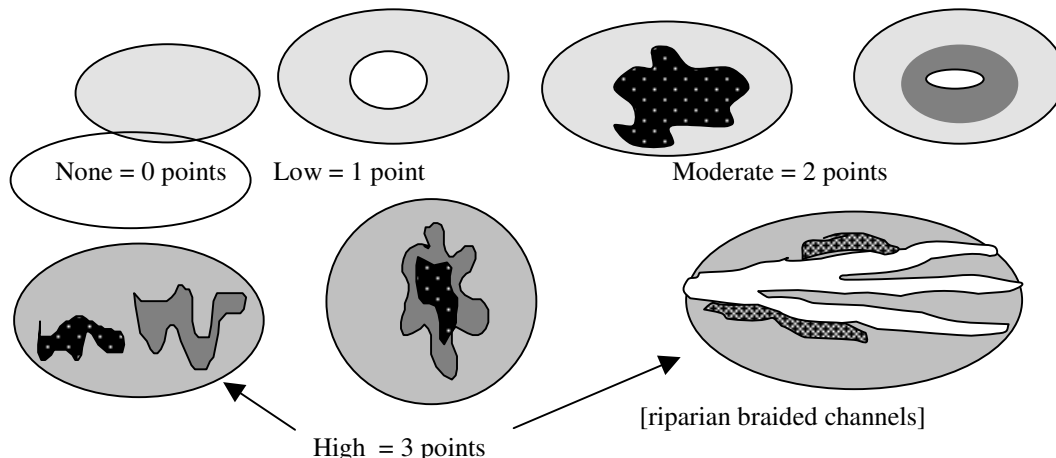
List species below if you want to: 5 - 19 species ..... points = 1

< 5 species ..... points = 0

0

**H 1.4. Interspersion of habitats (see p. 72)**

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



0

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is always "high".



<p><b>H 1.5. Special Habitat Features: (see p. 73)</b>  <i>Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt;4in. diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 inches) in the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt;30degree slope) OR signs of recent beaver activity are present</p> <p><input type="checkbox"/> At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (structures for egg-laying by amphibians)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants</p>	0
<p style="text-align: right;"><b>H 1. TOTAL</b> Score - potential for providing habitat</p> <p><b>Add the scores in the column above</b></p>	1
<p><b>H 2. DOES THE WETLAND HAVE THE OPPORTUNITY TO PROVIDE HABITAT FOR MANY SPECIES?</b></p>	
<p><b>H 2.1 Buffers (see p. 75)</b>  <i>Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."</i></p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% of circumference. No developed areas within undisturbed part of buffer. (relatively undisturbed also means no-grazing) ..... Points = 5</p> <p><input type="checkbox"/> 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 50% circumference..... Points = 4</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% circumference..... Points = 4</p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 25% circumference..... Points = 3</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for &gt; 50% circumference. .... Points = 3</p> <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <p><input type="checkbox"/> No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland &gt; 95% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> No paved areas or buildings within 50m of wetland for &gt;50% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> Heavy grazing in buffer. .... Points = 1</p> <p><input type="checkbox"/> Vegetated buffers are &lt;2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland) ..... Points = 0</p> <p><input checked="" type="checkbox"/> <b>BUFFER DOES NOT MEET ANY OF THE CRITERIA ABOVE. POINTS = 1</b></p>	1
<p><b>H 2.2 Corridors and Connections (see p. 76)</b></p> <p><b>H 2.2.1</b> Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are considered breaks in the corridor).</p> <p style="text-align: center;">YES = <b>4 points</b> (go to H 2.3)      NO = go to H 2.2.2</p> <p><b>H 2.2.2</b> Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? <b>OR a Lake-fringe wetland</b>, if it does not have an undisturbed corridor as in the question above?</p> <p style="text-align: center;">YES = <b>2 points</b> (go to H 2.3)      NO = H 2.2.3</p> <p><b>H 2.2.3</b> Is the wetland:</p>	1

<p>within 5 mi (8km) of a brackish or salt water estuary OR  within 3 mi of a large field or pasture (&gt;40 acres) OR  * within 1 mi of a lake greater than 20 acres?  <div style="border: 1px solid black; border-radius: 50%; padding: 2px; display: inline-block;">YES = 1 point</div> NO = 0 points</p>	
<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW (see p. 77)</u>  Which of the following priority habitats are within 330ft (100m) of the wetland?  <i>(see text for a more detailed description of these priority habitats)</i></p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> <b>Riparian:</b> The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</li> <li><input type="checkbox"/> <b>Aspen Stands:</b> Pure or mixed stands of aspen greater than 0.8 ha (2 acres).</li> <li><input type="checkbox"/> <b>Cliffs:</b> Greater than 7.6 m (25 ft) high and occurring below 5000 ft.</li> <li><input type="checkbox"/> <b>Old-growth forests:</b> (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) &gt; 81 cm (32 in) dbh or &gt; 200 years of age.</li> <li><input type="checkbox"/> <b>Mature forests:</b> Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.</li> <li><input type="checkbox"/> <b>Prairies:</b> Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.</li> <li><input type="checkbox"/> <b>Talus:</b> Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</li> <li><input type="checkbox"/> <b>Caves:</b> A naturally occurring cavity, recess, void, or system of interconnected passages</li> <li><input type="checkbox"/> <b>Oregon white Oak:</b> Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</li> <li><input checked="" type="checkbox"/> <b>Urban Natural Open Space:</b> A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</li> <li><input type="checkbox"/> <b>Estuary/Estuary-like:</b> Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.</li> <li><input type="checkbox"/> <b>Marine/Estuarine Shorelines:</b> Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</li> </ul> <p>If wetland has <b>3 or more</b> priority habitats = <b>4 points</b>  If wetland has <b>2</b> priority habitats = <b>3 points</b>  If wetland has <b>1</b> priority habitat = <b>1 point</b>  No habitats = <b>0 points</b></p>	3

Wetland name or number: Burke Gilman Wetland #1

<p><b>H 2.4 Wetland Landscape</b> (<i>choose the <b>one</b> description of the landscape around the wetland that best fits</i>)  <i>(see p. 79)</i></p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. .... points = 5</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3</p> <p>The wetland is Lake-fringe on a lake <b>with</b> disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3</p> <p>There is at least 1 wetland within ½ mile. .... points = 2</p> <p>There are no wetlands within ½ mile. .... points = 0</p>	3
<p><b>H 2. TOTAL Score</b> - opportunity for providing habitat  <i>Add the scores in the column above</i></p>	8
<p><b>Total Score for Habitat Functions</b> – add the points for H 1, H 2 and record the result on p. 1</p>	9

Wetland name or number: Burke Gilman Wetland #1

Figure 1 – CAD Drawing of Wetland 1

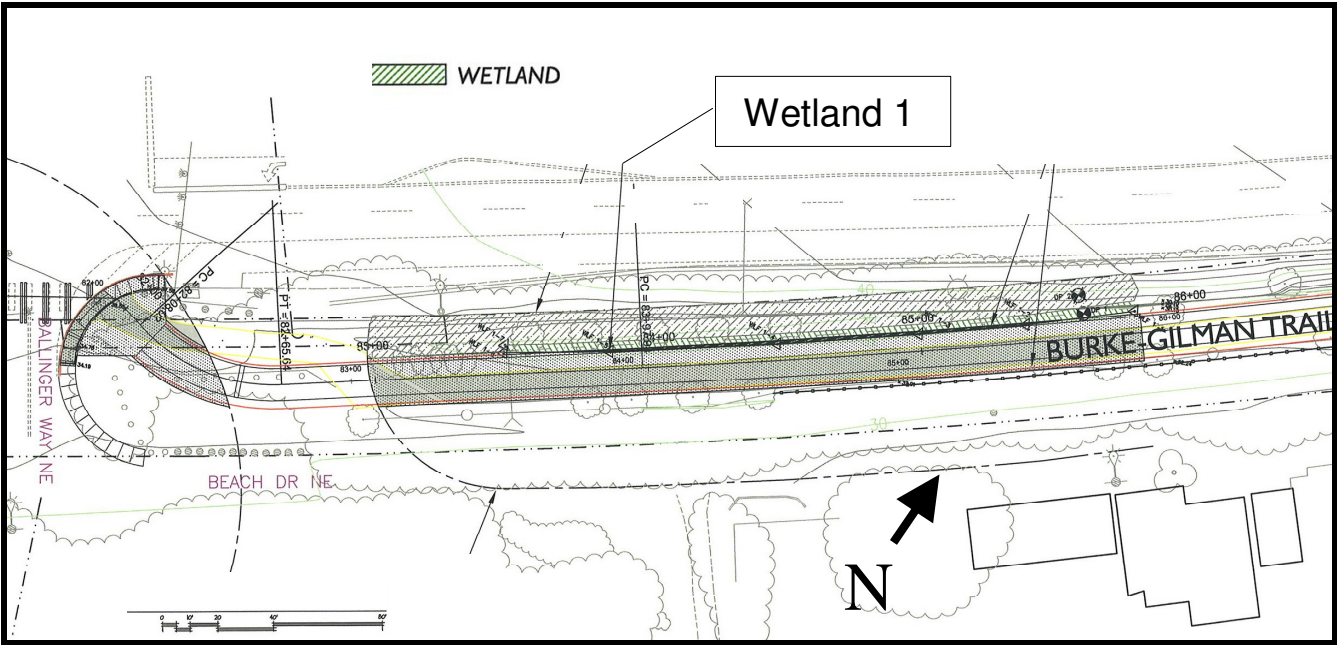
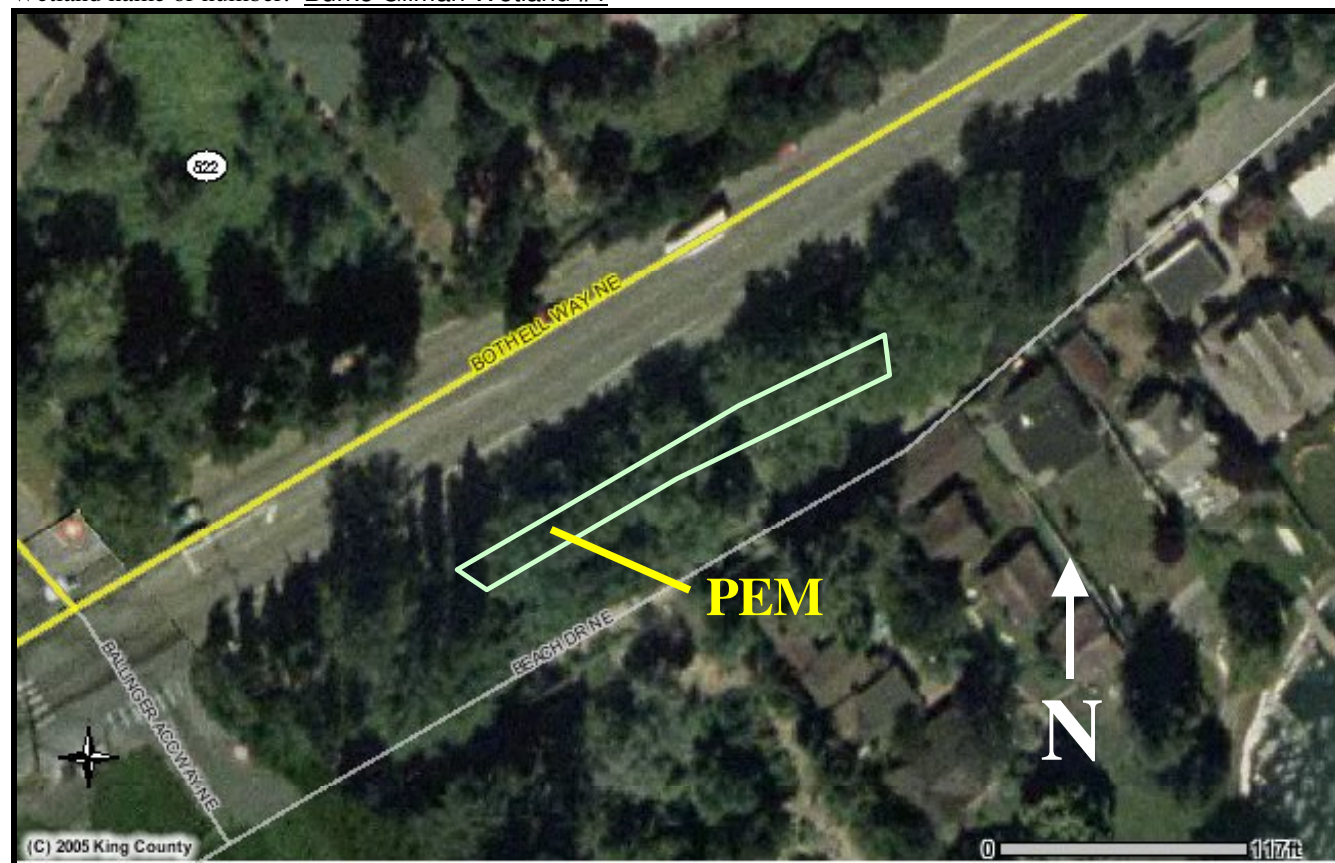


Figure 2 – Cowardin Classes

Wetland name or number: Burke Gilman Wetland #1



 **Approximate wetland boundary**



**FIGURE 3 – HYDROPERIODS**



Estimated area of occasional ponding/flooding, remainder is saturated only

**Figure 4 – Aerial Photo Showing Buffers**

Wetland name or number: Burke Gilman Wetland #1



**300-foot buffer reference line**

Wetland name or number: Burke Gilman Wetland #2

## WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland Burke Gilman Wetland #2 Date of site visit August 23, 2007

Rated by Jenni Creveling Trained by Ecology? Yes ☒ No ☐ Date of Training 4/06

SEC: \_\_\_\_\_ TWNSHP: \_\_\_\_\_ RNGE: \_\_\_\_\_ Is S/T/R in Appendix D Yes ☐ No ☐

Map of wetland unit: Figure \_\_\_\_ Estimated Size \_\_\_\_

### SUMMARY OF RATING

#### Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☒ IV ☐

Category I = Score >70

Category II = Score 51-69

Category III = Score 30-50

Category IV = Score <30

Score for Water Quality Functions

16

Score for Hydrologic Functions

9

Score for Habitat Functions

11

TOTAL score for functions

36

#### Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the “highest” category from above)

III

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class	
Estuarine	Depressional	X
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above	Check if unit has multiple HGM classes present	<input type="checkbox"/>



**Does the wetland unit being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	<u>YES</u>	<u>NO</u>
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered <b>animal</b> or <b>plant</b> species (T/E species)?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.</u>		<u>X</u>
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered <b>animal</b> species?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).</u>		<u>X</u>
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		<u>X</u>
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

## Classification of Wetland Units in Western Washington

**If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.**

**1.** Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ **NO** – go to 2

☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. ).

**2.** The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ **NO** – go to 3

☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

**3.** Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒ **NO** – go to 4

☐ **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

**4.** Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

*NOTE: Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ **NO** – go to 5

☐ **YES** – The wetland class is **Slope**

**6.** Does the entire wetland unit **meet all** of the following criteria?

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☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

*NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.*

☒ **NO - go to 6** ☐ **YES – The wetland class is *Riverine***

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7

☒ **YES – The wetland class is **Depressional****

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8

☐ **YES – The wetland class is **Depressional****

**8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.**

<i>HGM classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
<b>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality</b>		
D	<b>D 1. Does the wetland have the potential to improve water quality?</b> (see p. 38)	
D	<p>D 1.1 Characteristics of surface water flows out of the wetland:</p> <p>Unit is a depression with no surface water leaving it (no outlet)..... points = 3</p> <p>Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2</p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 1</p> <p>Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b>, and/or outlet is a man-made ditch ..... points = 1</p> <p>(If ditch is not permanently flowing treat unit as "intermittently flowing")</p> <p>Provide photo or drawing</p>	Figure <u>3</u>
D	<p>D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (<i>use NRCS definitions</i>).</p> <p>YES points = 4</p> <p>NO points = 0</p>	0
D	<p>D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class):</p> <p>Wetland has persistent, ungrazed, vegetation &gt;= 95% of area ..... points = 5</p> <p>Wetland has persistent, ungrazed, vegetation &gt;= 1/2 of area ..... points = 3</p> <p>Wetland has persistent, ungrazed vegetation &gt;= 1/10 of area ..... points = 1</p> <p>Wetland has persistent, ungrazed vegetation &lt;1/10 of area..... points = 0</p> <p>Map of Cowardin vegetation classes</p>	Figure <u>5</u>
D	<p>D1.4 Characteristics of seasonal ponding or inundation.</p> <p><i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i></p> <p>Area seasonally ponded is &gt; 1/2 total area of wetland..... points = 4</p> <p>Area seasonally ponded is &gt; 1/4 total area of wetland..... points = 2</p> <p>Area seasonally ponded is &lt; 1/4 total area of wetland..... points = 0</p> <p>NOTE: See text for indicators of seasonal and permanent inundation.</p> <p>Map of hydroperiods</p>	Figure <u>0</u>
D	<p><b>Total for D 1</b> Add the points in the boxes above</p>	8
D	<p><b>D 2. Does the wetland unit have the opportunity to improve water quality?</b> (see p. 44)</p> <p>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i></p> <p><input type="checkbox"/> Grazing in the wetland or within 150 ft</p> <p><input checked="" type="checkbox"/> Untreated stormwater discharges to wetland</p> <p><input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland</p> <p><input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging</p> <p><input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland</p> <p><input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen</p> <p><input type="checkbox"/> Other _____</p> <p>YES multiply score in D 1. by 2      NO multiply score in D 1. by 1</p>	multiplier <u>2</u>
D	<p><b>TOTAL - Water Quality Functions</b> Multiply the score from D1 by D2</p> <p>Add score to table on p. 1</p>	16

HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation		
	<b>D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?</b>	(see p. 46)
<b>D</b>	<p>D 3.1 Characteristics of surface water flows out of the wetland unit</p> <p>Unit is a depression with no surface water leaving it (no outlet)..... points = 4</p> <p>Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2</p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 1</p> <p>Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b>, and/or outlet is a man-made ditch ..... points = 1</p> <p>(If ditch is not permanently flowing treat unit as "intermittently flowing")</p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 0</p>	4
<b>D</b>	<p>D 3.2 Depth of storage during wet periods</p> <p>Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).</p> <p>Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7</p> <p>The wetland is a "headwater" wetland" ..... points = 5</p> <p>Marks of ponding between 2 ft to &lt; 3 ft from surface or bottom of outlet..... points = 5</p> <p>Marks are at least 0.5 ft to &lt; 2 ft from surface or bottom of outlet ..... points = 3</p> <p>Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1</p> <p>Marks of ponding less than 0.5 ft..... points = 0</p>	0
<b>D</b>	<p>D 3.3 Contribution of wetland unit to storage in the watershed</p> <p>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</p> <p>The area of the basin is less than 10 times the area of the unit ..... points = 5</p> <p>The area of the basin is 10 to 100 times the area of the unit ..... points = 3</p> <p>The area of the basin is more than 100 times the area of the unit ..... points = 0</p> <p>Entire unit is in the FLATS class ..... points = 5</p>	5
<b>D</b>	<b>Total for D 3</b> Add the points in the boxes above	9
<b>D</b>	<p><b>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</b></p> <p>(see p. 48)</p> <p>Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur.</p> <p>Note which of the following conditions apply.</p> <p><input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems</p> <p><input type="checkbox"/> Wetland drains to a river or stream that has flooding problems</p> <p><input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems</p> <p><input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> YES multiplier is 2      <input checked="" type="checkbox"/> NO multiplier is 1</p>	multiplier <u>1</u>
<b>D</b>	<b>TOTAL - Hydrologic Functions</b> Multiply the score from D 3 by D 4 Add score to table on p. 1	9

<b>HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat</b>	
<b>H 1. Does the wetland have the <u>potential</u> to provide habitat for many species?</b>	
<p><b>H 1.1 <u>Vegetation structure</u> (see p. 68)</b>            Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.</p> <p> <input type="checkbox"/> Aquatic bed  <input checked="" type="checkbox"/> Emergent plants  <input checked="" type="checkbox"/> Scrub/shrub (areas where shrubs have &gt;30% cover)  <input type="checkbox"/> Forested (areas where trees have &gt;30% cover)  <input type="checkbox"/> Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)         </p> <p>Add the number of vegetation types that qualify. If you have:</p> <p style="text-align: right;">           4 types or more ..... points = 4            3 types ..... points = 2            2 types ..... points = 1            1 type ..... points = 0         </p>	1
<p><b>H 1.2. <u>Hydroperiods</u> (see p. 69)</b>            Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)</p> <p> <input type="checkbox"/> Permanently flooded or inundated  <input checked="" type="checkbox"/> Seasonally flooded or inundated  <input type="checkbox"/> Occasionally flooded or inundated  <input checked="" type="checkbox"/> Saturated only  <input type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland  <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland  <input type="checkbox"/> <b>Lake-fringe wetland = 2 points</b>  <input type="checkbox"/> <b>Freshwater tidal wetland = 2 points</b> </p> <p style="text-align: right;">           4 or more types present ..... points = 3            3 types present ..... points = 2            2 types present ..... points = 1         </p>	1
<p><b>H 1.3. <u>Richness of Plant Species</u> (see p. 71)</b>            Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. (different patches of the same species can be combined to meet the size threshold)            You do not have to name the species.            Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle            If you counted:            List species below if you want to:</p> <p style="text-align: right;">           &gt; 19 species ..... points = 2            5 - 19 species ..... points = 1            &lt; 5 species ..... points = 0         </p>	1
<p><b>H 1.4. <u>Interspersion of habitats</u> (see p. 72)</b>            Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.</p> <div style="text-align: center;"> <p>None = 0 points      Low = 1 point      Moderate = 2 points      High = 3 points      [riparian braided channels]</p> </div>	1
<p><b>NOTE:</b> If you have four or more vegetation types or three vegetation types and open water the rating is</p>	

always "high".	
<p><b>H 1.5. Special Habitat Features: (see p. 73)</b>  <i>Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt;4in. diameter and 6 ft long).</p> <p><input checked="" type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 inches) in the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt;30degree slope) OR signs of recent beaver activity are present</p> <p><input type="checkbox"/> At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (structures for egg-laying by amphibians)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants</p>	1
<p style="text-align: right;"><b>H 1. TOTAL</b> Score - potential for providing habitat</p> <p><b>Add the scores in the column above</b></p>	5
<b>H 2. DOES THE WETLAND HAVE THE OPPORTUNITY TO PROVIDE HABITAT FOR MANY SPECIES?</b>	
<p><b>H 2.1 Buffers (see p. 75)</b>  <i>Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."</i></p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% of circumference. No developed areas within undisturbed part of buffer. .... Points = 5  (relatively undisturbed also means no-grazing) .....</p> <p><input type="checkbox"/> 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 50% circumference..... Points = 4</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% circumference..... Points = 4</p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 25% circumference..... Points = 3</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for &gt; 50% circumference. .... Points = 3</p> <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <p><input type="checkbox"/> No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland &gt; 95% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> No paved areas or buildings within 50m of wetland for &gt;50% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> Heavy grazing in buffer. .... Points = 1</p> <p><input type="checkbox"/> Vegetated buffers are &lt;2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland) ..... Points = 0</p> <p><input checked="" type="checkbox"/> <b>BUFFER DOES NOT MEET ANY OF THE CRITERIA ABOVE. POINTS = 1</b></p>	1
<p><b>H 2.2 Corridors and Connections (see p. 76)</b>  H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are</p>	1

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*considered breaks in the corridor).*

YES = **4 points** (go to H 2.3)      NO = go to H 2.2.2

H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above?

YES = **2 points** (go to H 2.3)      NO = H 2.2.3

H 2.2.3 Is the wetland:

within 5 mi (8km) of a brackish or salt water estuary OR

within 3 mi of a large field or pasture (>40 acres) OR

\*within 1 mi of a lake greater than 20 acres?

**YES = 1 point**

**NO = 0 points**



<p>H 2.3 Near or adjacent to other priority habitats listed by WDFW (<i>see p. 77</i>)</p> <p>Which of the following priority habitats are within 330ft (100m) of the wetland? (<i>see text for a more detailed description of these priority habitats</i>)</p> <p><input type="checkbox"/> <b>Riparian:</b> The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> <b>Aspen Stands:</b> Pure or mixed stands of aspen greater than 0.8 ha (2 acres).</p> <p><input type="checkbox"/> <b>Cliffs:</b> Greater than 7.6 m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> <b>Old-growth forests:</b> (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) &gt; 81 cm (32 in) dbh or &gt; 200 years of age.</p> <p><input type="checkbox"/> <b>Mature forests:</b> Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.</p> <p><input type="checkbox"/> <b>Prairies:</b> Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> <b>Talus:</b> Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> <b>Caves:</b> A naturally occurring cavity, recess, void, or system of interconnected passages</p> <p><input type="checkbox"/> <b>Oregon white Oak:</b> Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input checked="" type="checkbox"/> <b>Urban Natural Open Space:</b> A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> <b>Estuary/Estuary-like:</b> Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> <b>Marine/Estuarine Shorelines:</b> Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has <b>3 or more</b> priority habitats = <b>4 points</b>          If wetland has <b>2</b> priority habitats = <b>3 points</b>          If wetland has <b>1</b> priority habitat = <b>1 point</b>          No habitats = <b>0 points</b></p>	1
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Wetland name or number: Burke Gilman Wetland #2

<p><b>H 2.4 Wetland Landscape</b> (<i>choose the <b>one</b> description of the landscape around the wetland that best fits</i>)  <i>(see p. 79)</i></p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. .... points = 5</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3</p> <p>The wetland is Lake-fringe on a lake <b>with</b> disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3</p> <p>There is at least 1 wetland within ½ mile. .... points = 2</p> <p>There are no wetlands within ½ mile. .... points = 0</p>	3
<p><b>H 2. TOTAL Score</b> - opportunity for providing habitat  <i>Add the scores in the column above</i></p>	6
<p><b>Total Score for Habitat Functions</b> – add the points for H 1, H 2 and record the result on p. 1</p>	11

Wetland name or number: Burke Gilman Wetland #3

## WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland Burke Gilman Wetland #3 Date of site visit August 23, 2007

Rated by Jenni Creveling Trained by Ecology? Yes ☒ No ☐ Date of Training 4/06

SEC: \_\_\_\_\_ TWNSHP: \_\_\_\_\_ RNGE: \_\_\_\_\_ Is S/T/R in Appendix D Yes ☐ No ☐

Map of wetland unit: Figure \_\_\_\_ Estimated Size \_\_\_\_

### SUMMARY OF RATING

#### Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☐ IV ☒

Category I = Score >70  
Category II = Score 51-69  
Category III = Score 30-50  
Category IV = Score < 30

Score for Water Quality Functions

14

Score for Hydrologic Functions

5

Score for Habitat Functions

10

**TOTAL score for functions**

**29**

#### Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the “highest” category from above)

**IV**

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class	
Estuarine	Depressional	X
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above	Check if unit has multiple HGM classes present	<input type="checkbox"/>

**Does the wetland unit being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	<u>YES</u>	<u>NO</u>
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered <b>animal</b> or <b>plant</b> species (T/E species)?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.</u>		<u>X</u>
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered <b>animal</b> species?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).</u>		<u>X</u>
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		<u>X</u>
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

## Classification of Wetland Units in Western Washington

**If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.**

**1.** Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ **NO** – go to 2

☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. ).

**2.** The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ **NO** – go to 3

☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

**3.** Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒ **NO** – go to 4

☐ **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

**4.** Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

*NOTE: Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ **NO** – go to 5

☐ **YES** – The wetland class is **Slope**

**7.** Does the entire wetland unit **meet all** of the following criteria?

Wetland name or number: Burke Gilman Wetland #3

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

*NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.*

☒ **NO - go to 6** ☐ **YES – The wetland class is *Riverine***

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7

☒ **YES – The wetland class is **Depressional****

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8

☐ **YES – The wetland class is **Depressional****

**8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.**

<i>HGM classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
<b>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality</b>		
D	<b>D 1. Does the wetland have the potential to improve water quality?</b> (see p. 38)	
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet)..... points = 3 Unit has an intermittently flowing, or highly constricted permanently flowing outlet... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> )... points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	2
D	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic ( <i>use NRCS definitions</i> ). YES points = 4 NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): Wetland has persistent, ungrazed, vegetation >= 95% of area ..... points = 5 Wetland has persistent, ungrazed, vegetation >= 1/2 of area ..... points = 3 Wetland has persistent, ungrazed vegetation >= 1/10 of area ..... points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area..... points = 0 Map of Cowardin vegetation classes	3
D	D1.4 Characteristics of seasonal ponding or inundation. <i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i> Area seasonally ponded is > 1/2 total area of wetland..... points = 4 Area seasonally ponded is > 1/4 total area of wetland..... points = 2 Area seasonally ponded is < 1/4 total area of wetland..... points = 0 NOTE: See text for indicators of seasonal and permanent inundation. Map of hydroperiods	2
D	<b>Total for D 1</b> Add the points in the boxes above	7
D	<b>D 2. Does the wetland unit have the opportunity to improve water quality?</b> (see p. 44) Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i> <input type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen <input type="checkbox"/> Other _____ <b>YES</b> multiply score in D 1. by 2 <b>NO</b> multiply score in D 1. by 1	multiplier 2
D	<b>TOTAL - Water Quality Functions</b> Multiply the score from D1 by D2 Add score to table on p. 1	14

HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation (see p. 46)		
<b>D</b>	<b>D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?</b> D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet)..... points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 0	2
<b>D</b>	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).</i> Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7 The wetland is a "headwater" wetland" ..... points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet ..... points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1 Marks of ponding less than 0.5 ft..... points = 0	0
<b>D</b>	D 3.3 Contribution of wetland unit to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit ..... points = 5 The area of the basin is 10 to 100 times the area of the unit ..... points = 3 The area of the basin is more than 100 times the area of the unit ..... points = 0 Entire unit is in the FLATS class ..... points = 5	3
<b>D</b>	<b>Total for D 3</b> <i>Add the points in the boxes above</i>	5
<b>D</b>	<b>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</b> (see p. 48) Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. <i>Note which of the following conditions apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ <input type="checkbox"/> YES multiplier is 2 <input checked="" type="checkbox"/> NO multiplier is 1	multiplier 1
<b>D</b>	<b>TOTAL - Hydrologic Functions</b> Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	5



**HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat****H 1. Does the wetland have the potential to provide habitat for many species?****H 1.1 Vegetation structure (see p. 68)**

Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.

- ☐ Aquatic bed  
☒ Emergent plants  
☒ Scrub/shrub (areas where shrubs have >30% cover)  
☐ Forested (areas where trees have >30% cover)  
☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)

Add the number of vegetation types that qualify. If you have:

4 types or more ..... points = 4  
 3 types ..... points = 2  
 2 types ..... points = 1  
 1 type ..... points = 0

1

**H 1.2. Hydroperiods (see p. 69)**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)

- ☐ Permanently flooded or inundated  
☒ Seasonally flooded or inundated  
☐ Occasionally flooded or inundated  
☒ Saturated only  
☐ Permanently flowing stream or river in, or adjacent to, the wetland  
☐ Seasonally flowing stream in, or adjacent to, the wetland  
☐ **Lake-fringe wetland = 2 points**  
☐ **Freshwater tidal wetland = 2 points**

4 or more types present ..... points = 3  
 3 types present ..... points = 2  
 2 types present ..... points = 1

1

**H 1.3. Richness of Plant Species (see p. 71)**

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

If you counted:

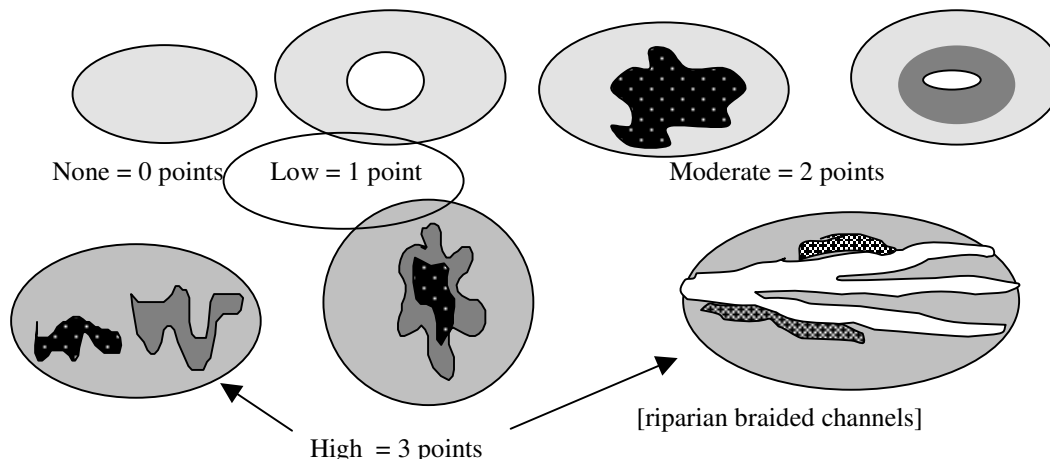
List species below if you want to:

> 19 species ..... points = 2  
 5 - 19 species ..... points = 1  
 < 5 species ..... points = 0

1

**H 1.4. Interspersion of habitats (see p. 72)**

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



1

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is

always "high".	
<p><b>H 1.5. Special Habitat Features: (see p. 73)</b>  <i>Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt;4in. diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 inches) in the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt;30degree slope) OR signs of recent beaver activity are present</p> <p><input type="checkbox"/> At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (structures for egg-laying by amphibians)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants</p>	0
<p style="text-align: right;"><b>H 1. TOTAL</b> Score - potential for providing habitat</p> <p><b>Add the scores in the column above</b></p>	4
<b>H 2. DOES THE WETLAND HAVE THE OPPORTUNITY TO PROVIDE HABITAT FOR MANY SPECIES?</b>	
<p><b>H 2.1 Buffers (see p. 75)</b>  <i>Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."</i></p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% of circumference. No developed areas within undisturbed part of buffer. .... Points = 5  (relatively undisturbed also means no-grazing) .....</p> <p><input type="checkbox"/> 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 50% circumference..... Points = 4</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% circumference..... Points = 4</p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 25% circumference..... Points = 3</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for &gt; 50% circumference. .... Points = 3</p> <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <p><input type="checkbox"/> No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland &gt; 95% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> No paved areas or buildings within 50m of wetland for &gt;50% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> Heavy grazing in buffer. .... Points = 1</p> <p><input type="checkbox"/> Vegetated buffers are &lt;2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland) ..... Points = 0</p> <p><input checked="" type="checkbox"/> <b>BUFFER DOES NOT MEET ANY OF THE CRITERIA ABOVE. POINTS = 1</b></p>	1
<p><b>H 2.2 Corridors and Connections (see p. 76)</b>  H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are</p>	1

Wetland name or number: Burke Gilman Wetland #3

*considered breaks in the corridor).*

YES = **4 points** (go to H 2.3)      NO = go to H 2.2.2

H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above?

YES = **2 points** (go to H 2.3)      NO = H 2.2.3

H 2.2.3 Is the wetland:

within 5 mi (8km) of a brackish or salt water estuary OR

within 3 mi of a large field or pasture (>40 acres) OR

\* within 1 mi of a lake greater than 20 acres?

**YES = 1 point**

**NO = 0 points**

<p>H 2.3 Near or adjacent to other priority habitats listed by WDFW (<i>see p. 77</i>)</p> <p>Which of the following priority habitats are within 330ft (100m) of the wetland? (<i>see text for a more detailed description of these priority habitats</i>)</p> <p><input type="checkbox"/> <b>Riparian:</b> The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> <b>Aspen Stands:</b> Pure or mixed stands of aspen greater than 0.8 ha (2 acres).</p> <p><input type="checkbox"/> <b>Cliffs:</b> Greater than 7.6 m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> <b>Old-growth forests:</b> (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) &gt; 81 cm (32 in) dbh or &gt; 200 years of age.</p> <p><input type="checkbox"/> <b>Mature forests:</b> Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.</p> <p><input type="checkbox"/> <b>Prairies:</b> Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> <b>Talus:</b> Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> <b>Caves:</b> A naturally occurring cavity, recess, void, or system of interconnected passages</p> <p><input type="checkbox"/> <b>Oregon white Oak:</b> Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input checked="" type="checkbox"/> <b>Urban Natural Open Space:</b> A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> <b>Estuary/Estuary-like:</b> Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> <b>Marine/Estuarine Shorelines:</b> Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has <b>3 or more</b> priority habitats = <b>4 points</b>          If wetland has <b>2</b> priority habitats = <b>3 points</b>          If wetland has <b>1</b> priority habitat = <b>1 point</b>          No habitats = <b>0 points</b></p>	<p>1</p>
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Wetland name or number: Burke Gilman Wetland #3

<p><b>H 2.4 Wetland Landscape</b> (<i>choose the <b>one</b> description of the landscape around the wetland that best fits</i>)  <i>(see p. 79)</i></p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. .... points = 5</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3</p> <p>The wetland is Lake-fringe on a lake <b>with</b> disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3</p> <p>There is at least 1 wetland within ½ mile. .... points = 2</p> <p>There are no wetlands within ½ mile. .... points = 0</p>	3
<p><b>H 2. TOTAL Score</b> - opportunity for providing habitat  <i>Add the scores in the column above</i></p>	6
<p><b>Total Score for Habitat Functions</b> – add the points for H 1, H 2 and record the result on p. 1</p>	10

Wetland name or number: Burke Gilman Wetland #4

## WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland Burke Gilman Wetland #4 Date of site visit August 23, 2007

Rated by Jenni Creveling Trained by Ecology? Yes ☒ No ☐ Date of Training 4/06

SEC: \_\_\_\_\_ TWNSHP: \_\_\_\_\_ RNGE: \_\_\_\_\_ Is S/T/R in Appendix D Yes ☐ No ☐

Map of wetland unit: Figure \_\_\_\_ Estimated Size \_\_\_\_

### SUMMARY OF RATING

#### Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☐ IV ☒

Category I = Score >70  
Category II = Score 51-69  
Category III = Score 30-50  
Category IV = Score < 30

Score for Water Quality Functions

12

Score for Hydrologic Functions

7

Score for Habitat Functions

10

**TOTAL score for functions**

**29**

#### Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the “highest” category from above)

**IV**

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class	
Estuarine	Depressional	X
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above	Check if unit has multiple HGM classes present	<input type="checkbox"/>

**Does the wetland unit being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	<u>YES</u>	<u>NO</u>
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered <b>animal</b> or <b>plant</b> species (T/E species)?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.</u>		<u>X</u>
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered <b>animal</b> species?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).</u>		<u>X</u>
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		<u>X</u>
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

## Classification of Wetland Units in Western Washington

**If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.**

**1.** Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ **NO** – go to 2

☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. ).*

**2.** The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ **NO** – go to 3

☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

**3.** Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒ **NO** – go to 4

☐ **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

**4.** Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

*NOTE: Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ **NO** – go to 5

☐ **YES** – The wetland class is **Slope**

**8.** Does the entire wetland unit **meet all** of the following criteria?



Wetland name or number: Burke Gilman Wetland #4

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

*NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.*

☒ **NO** - go to 6

☐ **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7

☒ **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8

☐ **YES** – The wetland class is **Depressional**

**8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.**

<i>HGM classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
<b>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality</b>		
D	<b>D 1. Does the wetland have the potential to improve water quality?</b>	(see p. 38)
D	<p>D 1.1 Characteristics of surface water flows out of the wetland:</p> <p>Unit is a depression with no surface water leaving it (no outlet)..... points = 3</p> <p>Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2</p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 1</p> <p>Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b>, and/or outlet is a man-made ditch ..... points = 1</p> <p>(If ditch is not permanently flowing treat unit as "intermittently flowing")</p> <p>Provide photo or drawing</p>	Figure <u>    </u> 3
D	<p>D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (<i>use NRCS definitions</i>).</p> <p>YES points = 4</p> <p>NO points = 0</p>	0
D	<p>D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class):</p> <p>Wetland has persistent, ungrazed, vegetation &gt;= 95% of area ..... points = 5</p> <p>Wetland has persistent, ungrazed, vegetation &gt;= 1/2 of area ..... points = 3</p> <p>Wetland has persistent, ungrazed vegetation &gt;= 1/10 of area ..... points = 1</p> <p>Wetland has persistent, ungrazed vegetation &lt;1/10 of area..... points = 0</p> <p>Map of Cowardin vegetation classes</p>	Figure <u>    </u> 3
D	<p>D1.4 Characteristics of seasonal ponding or inundation.</p> <p><i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i></p> <p>Area seasonally ponded is &gt; 1/2 total area of wetland..... points = 4</p> <p>Area seasonally ponded is &gt; 1/4 total area of wetland..... points = 2</p> <p>Area seasonally ponded is &lt; 1/4 total area of wetland..... points = 0</p> <p>NOTE: See text for indicators of seasonal and permanent inundation.</p> <p>Map of hydroperiods</p>	Figure <u>    </u> 0
D	<p><b>Total for D 1</b></p> <p>Add the points in the boxes above</p>	6
D	<p><b>D 2. Does the wetland unit have the opportunity to improve water quality?</b></p> <p>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i></p> <p><input type="checkbox"/> Grazing in the wetland or within 150 ft</p> <p><input checked="" type="checkbox"/> Untreated stormwater discharges to wetland</p> <p><input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland</p> <p><input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging</p> <p><input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland</p> <p><input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen</p> <p><input type="checkbox"/> Other _____</p> <p>YES multiply score in D 1. by 2      NO multiply score in D 1. by 1</p>	(see p. 44)  multiplier <u>2</u>
D	<p><b>TOTAL - Water Quality Functions</b></p> <p>Multiply the score from D1 by D2</p> <p>Add score to table on p. 1</p>	12

HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation (see p. 46)		
<b>D</b>	<b>D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?</b> D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet)..... points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 0	4
<b>D</b>	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).</i> Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7 The wetland is a "headwater" wetland" ..... points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet ..... points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1 Marks of ponding less than 0.5 ft..... points = 0	0
<b>D</b>	D 3.3 Contribution of wetland unit to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit ..... points = 5 The area of the basin is 10 to 100 times the area of the unit ..... points = 3 The area of the basin is more than 100 times the area of the unit ..... points = 0 Entire unit is in the FLATS class ..... points = 5	3
<b>D</b>	<b>Total for D 3</b> <i>Add the points in the boxes above</i>	7
<b>D</b>	<b>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</b> (see p. 48) Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. <i>Note which of the following conditions apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ <input type="checkbox"/> YES multiplier is 2 <input checked="" type="checkbox"/> NO multiplier is 1	multiplier <u>1</u>
<b>D</b>	<b>TOTAL - Hydrologic Functions</b> Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	7

**HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat****H 1. Does the wetland have the potential to provide habitat for many species?****H 1.1 Vegetation structure (see p. 68)**

Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.

- ☐ Aquatic bed  
☒ Emergent plants  
☐ Scrub/shrub (areas where shrubs have >30% cover)  
☒ Forested (areas where trees have >30% cover)  
☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)

Add the number of vegetation types that qualify. If you have:

4 types or more ..... points = 4  
 3 types ..... points = 2  
 2 types ..... points = 1  
 1 type ..... points = 0

1

**H 1.2. Hydroperiods (see p. 69)**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)

- ☐ Permanently flooded or inundated  
☒ Seasonally flooded or inundated  
☐ Occasionally flooded or inundated  
☒ Saturated only  
☐ Permanently flowing stream or river in, or adjacent to, the wetland  
☐ Seasonally flowing stream in, or adjacent to, the wetland  
☐ **Lake-fringe wetland = 2 points**  
☐ **Freshwater tidal wetland = 2 points**

4 or more types present ..... points = 3  
 3 types present ..... points = 2  
 2 types present ..... points = 1

1

**H 1.3. Richness of Plant Species (see p. 71)**

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

If you counted:

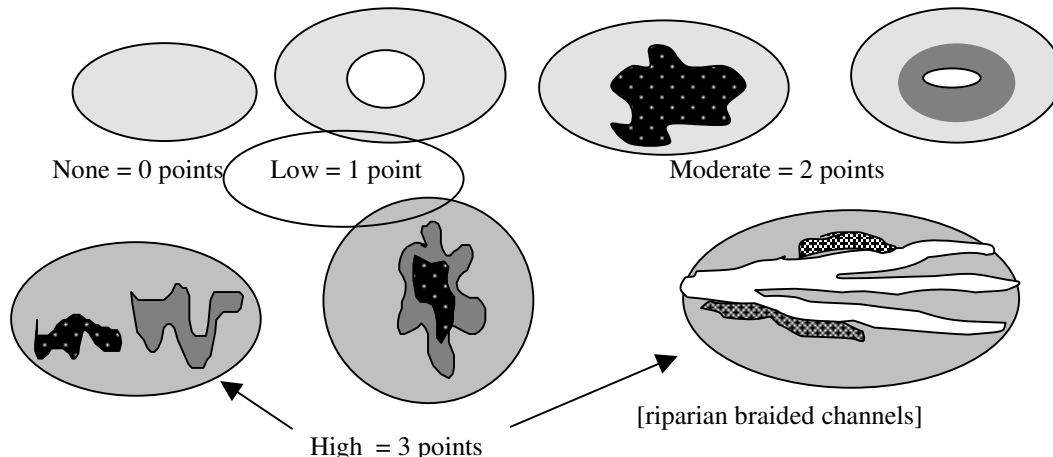
List species below if you want to:

> 19 species ..... points = 2  
 5 - 19 species ..... points = 1  
 < 5 species ..... points = 0

1

**H 1.4. Interspersion of habitats (see p. 72)**

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



1

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is

always "high".	
<b>H 1.5. Special Habitat Features: (see p. 73)</b> <i>Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt;4in. diameter and 6 ft long).</li> <li><input type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 inches) in the wetland</li> <li><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m)</li> <li><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt;30degree slope) OR signs of recent beaver activity are present</li> <li><input type="checkbox"/> At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (structures for egg-laying by amphibians)</li> <li><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants</li> </ul>	0
<b>H 1. TOTAL Score - potential for providing habitat</b> <b>Add the scores in the column above</b>	4
<b>H 2. DOES THE WETLAND HAVE THE OPPORTUNITY TO PROVIDE HABITAT FOR MANY SPECIES?</b>	
<b>H 2.1 Buffers (see p. 75)</b> <i>Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% of circumference. No developed areas within undisturbed part of buffer. .... Points = 5</li> <li><input type="checkbox"/> 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 50% circumference..... Points = 4</li> <li><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% circumference..... Points = 4</li> <li><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 25% circumference..... Points = 3</li> <li><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for &gt; 50% circumference. .... Points = 3</li> <li>If buffer does not meet any of the three criteria above</li> <li><input type="checkbox"/> No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland &gt; 95% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</li> <li><input type="checkbox"/> No paved areas or buildings within 50m of wetland for &gt;50% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</li> <li><input type="checkbox"/> Heavy grazing in buffer. .... Points = 1</li> <li><input type="checkbox"/> Vegetated buffers are &lt;2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland) ..... Points = 0</li> <li><input checked="" type="checkbox"/> <b>BUFFER DOES NOT MEET ANY OF THE CRITERIA ABOVE. POINTS = 1</b></li> </ul>	1
<b>H 2.2 Corridors and Connections (see p. 76)</b> <b>H 2.2.1</b> Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are	1

Wetland name or number: Burke Gilman Wetland #4

*considered breaks in the corridor).*

YES = **4 points** (go to H 2.3)      NO = go to H 2.2.2

H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above?

YES = **2 points** (go to H 2.3)      NO = H 2.2.3

H 2.2.3 Is the wetland:

within 5 mi (8km) of a brackish or salt water estuary OR

within 3 mi of a large field or pasture (>40 acres) OR

\* within 1 mi of a lake greater than 20 acres?

**YES = 1 point**

**NO = 0 points**

<p>H 2.3 Near or adjacent to other priority habitats listed by WDFW (<i>see p. 77</i>)</p> <p>Which of the following priority habitats are within 330ft (100m) of the wetland? (<i>see text for a more detailed description of these priority habitats</i>)</p> <p><input type="checkbox"/> <b>Riparian:</b> The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> <b>Aspen Stands:</b> Pure or mixed stands of aspen greater than 0.8 ha (2 acres).</p> <p><input type="checkbox"/> <b>Cliffs:</b> Greater than 7.6 m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> <b>Old-growth forests:</b> (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) &gt; 81 cm (32 in) dbh or &gt; 200 years of age.</p> <p><input type="checkbox"/> <b>Mature forests:</b> Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.</p> <p><input type="checkbox"/> <b>Prairies:</b> Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> <b>Talus:</b> Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> <b>Caves:</b> A naturally occurring cavity, recess, void, or system of interconnected passages</p> <p><input type="checkbox"/> <b>Oregon white Oak:</b> Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input checked="" type="checkbox"/> <b>Urban Natural Open Space:</b> A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> <b>Estuary/Estuary-like:</b> Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> <b>Marine/Estuarine Shorelines:</b> Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has <b>3 or more</b> priority habitats = <b>4 points</b>          If wetland has <b>2</b> priority habitats = <b>3 points</b>          If wetland has <b>1</b> priority habitat = <b>1 point</b>          No habitats = <b>0 points</b></p>	1
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Wetland name or number: Burke Gilman Wetland #4

<p><b>H 2.4 Wetland Landscape</b> (<i>choose the <b>one</b> description of the landscape around the wetland that best fits</i>)  <i>(see p. 79)</i></p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. .... points = 5</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3</p> <p>The wetland is Lake-fringe on a lake <b>with</b> disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3</p> <p>There is at least 1 wetland within ½ mile. .... points = 2</p> <p>There are no wetlands within ½ mile. .... points = 0</p>	3
<p><b>H 2. TOTAL Score</b> - opportunity for providing habitat  <i>Add the scores in the column above</i></p>	6
<p><b>Total Score for Habitat Functions</b> – add the points for H 1, H 2 and record the result on p. 1</p>	10



Wetland name or number: Burke Gilman Wetland #5

## WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland Burke Gilman Wetland #5 Date of site visit August 23, 2007

Rated by Jenni Creveling Trained by Ecology? Yes ☒ No ☐ Date of Training 4/06

SEC: 15 TWSHP: 26N RGE: 04E Is S/T/R in Appendix D Yes ☐ No ☒

Map of wetland unit: Figure 5 Estimated Size       

### SUMMARY OF RATING

#### Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☐ IV ☒

Category I = Score >70  
Category II = Score 51-69  
Category III = Score 30-50  
Category IV = Score < 30

Score for Water Quality Functions

14

Score for Hydrologic Functions

5

Score for Habitat Functions

7

TOTAL score for functions

26

#### Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the “highest” category from above)

IV

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class	
Estuarine	Depressional	X
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above	Check if unit has multiple HGM classes present	<input type="checkbox"/>

**Does the wetland unit being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	<u>YES</u>	<u>NO</u>
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered <b>animal</b> or <b>plant</b> species (T/E species)?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.</u>		<u>X</u>
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered <b>animal</b> species?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).</u>		<u>X</u>
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		<u>X</u>
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

## Classification of Wetland Units in Western Washington

**If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.**

**1.** Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ **NO** – go to 2

☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. ).

**2.** The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ **NO** – go to 3

☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

**3.** Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒ **NO** – go to 4

☐ **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

**4.** Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

*NOTE: Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ **NO** – go to 5

☐ **YES** – The wetland class is **Slope**

**9.** Does the entire wetland unit **meet all** of the following criteria?

Wetland name or number: Burke Gilman Wetland #5

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

*NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.*

☒ **NO - go to 6** ☐ **YES – The wetland class is *Riverine***

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7

☒ **YES – The wetland class is **Depressional****

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8

☐ **YES – The wetland class is **Depressional****

**8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.**

<i>HGM classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
<b>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality</b>		
D	<b>D 1. Does the wetland have the potential to improve water quality?</b> (see p. 38)	
D	<p>D 1.1 Characteristics of surface water flows out of the wetland:</p> <p>Unit is a depression with no surface water leaving it (no outlet)..... points = 3</p> <p>Unit has an intermittently flowing, or highly constricted permanently flowing outlet.... points = 2</p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 1</p> <p>Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b>, and/or outlet is a man-made ditch ..... points = 1</p> <p>(If ditch is not permanently flowing treat unit as "intermittently flowing")</p> <p>Provide photo or drawing</p>	<p><b>Figure 5</b></p> <p>2</p>
D	<p>D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (<i>use NRCS definitions</i>).</p> <p>YES points = 4</p> <p>NO points = 0</p>	0
D	<p>D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class):</p> <p>Wetland has persistent, ungrazed, vegetation &gt;= 95% of area ..... points = 5</p> <p>Wetland has persistent, ungrazed, vegetation &gt;= 1/2 of area ..... points = 3</p> <p>Wetland has persistent, ungrazed vegetation &gt;= 1/10 of area ..... points = 1</p> <p>Wetland has persistent, ungrazed vegetation &lt;1/10 of area..... points = 0</p> <p>Map of Cowardin vegetation classes</p>	<p><b>Figure 6</b></p> <p>3</p>
D	<p>D1.4 Characteristics of seasonal ponding or inundation.</p> <p><i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i></p> <p>Area seasonally ponded is &gt; 1/2 total area of wetland..... points = 4</p> <p>Area seasonally ponded is &gt; 1/4 total area of wetland..... points = 2</p> <p>Area seasonally ponded is &lt; 1/4 total area of wetland..... points = 0</p> <p>NOTE: See text for indicators of seasonal and permanent inundation.</p> <p>Map of hydroperiods</p>	<p><b>Figure 7</b></p> <p>2</p>
D	<p><b>Total for D 1</b> Add the points in the boxes above</p>	7
D	<p><b>D 2. Does the wetland unit have the opportunity to improve water quality?</b> (see p. 44)</p> <p>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i></p> <p><input type="checkbox"/> Grazing in the wetland or within 150 ft</p> <p><input checked="" type="checkbox"/> Untreated stormwater discharges to wetland</p> <p><input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland</p> <p><input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging</p> <p><input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland</p> <p><input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen</p> <p><input type="checkbox"/> Other _____</p> <p>YES multiply score in D 1. by 2      NO multiply score in D 1. by 1</p>	<p>multiplier</p> <p>2</p>
D	<p><b>TOTAL - Water Quality Functions</b> Multiply the score from D1 by D2</p> <p>Add score to table on p. 1</p>	14

HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation (see p. 46)		
<b>D</b>	<b>D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?</b> D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet)..... points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 0	2
<b>D</b>	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).</i> Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7 The wetland is a "headwater" wetland" ..... points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet ..... points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1 Marks of ponding less than 0.5 ft..... points = 0	0
<b>D</b>	D 3.3 Contribution of wetland unit to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit ..... points = 5 The area of the basin is 10 to 100 times the area of the unit ..... points = 3 The area of the basin is more than 100 times the area of the unit ..... points = 0 Entire unit is in the FLATS class ..... points = 5	3
<b>D</b>	<b>Total for D 3</b> <i>Add the points in the boxes above</i>	5
<b>D</b>	<b>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</b> <i>(see p. 48)</i> Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. <i>Note which of the following conditions apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ <input type="checkbox"/> YES multiplier is 2 <input checked="" type="checkbox"/> NO multiplier is 1	multiplier 1
<b>D</b>	<b>TOTAL - Hydrologic Functions</b> Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	5

**HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat****H 1. Does the wetland have the potential to provide habitat for many species?****H 1.1 Vegetation structure (see p. 68)**

Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.

- ☐ Aquatic bed  
☒ Emergent plants  
☐ Scrub/shrub (areas where shrubs have >30% cover)  
☐ Forested (areas where trees have >30% cover)  
☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)

Add the number of vegetation types that qualify. If you have:

- 4 types or more ..... points = 4  
 3 types ..... points = 2  
 2 types ..... points = 1  
 1 type ..... points = 0

0

**H 1.2. Hydroperiods (see p. 69)**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)

- ☐ Permanently flooded or inundated  
☒ Seasonally flooded or inundated  
☐ Occasionally flooded or inundated  
☒ Saturated only  
☐ Permanently flowing stream or river in, or adjacent to, the wetland  
☐ Seasonally flowing stream in, or adjacent to, the wetland  
☐ **Lake-fringe wetland = 2 points**  
☐ **Freshwater tidal wetland = 2 points**

- 4 or more types present ..... points = 3  
 3 types present ..... points = 2  
 2 types present ..... points = 1

1

**H 1.3. Richness of Plant Species (see p. 71)**

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

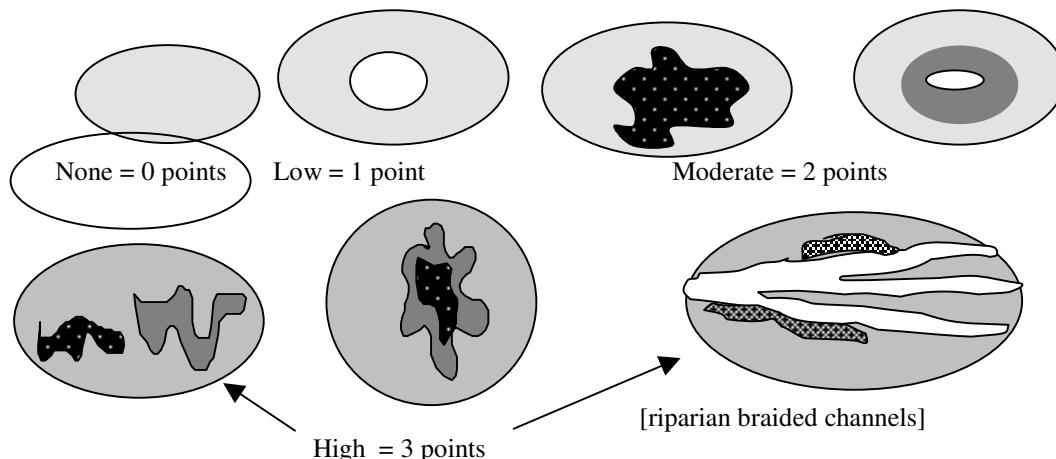
Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

- If you counted: > 19 species ..... points = 2  
 5 - 19 species ..... points = 1  
 < 5 species ..... points = 0

0

**H 1.4. Interspersion of habitats (see p. 72)**

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



0

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is

always "high".	
<p><b>H 1.5. Special Habitat Features: (see p. 73)</b>  <i>Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt;4in. diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 inches) in the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt;30degree slope) OR signs of recent beaver activity are present</p> <p><input type="checkbox"/> At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (structures for egg-laying by amphibians)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants</p>	0
<p style="text-align: right;"><b>H 1. TOTAL</b> Score - potential for providing habitat</p> <p><b>Add the scores in the column above</b></p>	1
<b>H 2. DOES THE WETLAND HAVE THE OPPORTUNITY TO PROVIDE HABITAT FOR MANY SPECIES?</b>	
<p><b>H 2.1 Buffers (see p. 75)</b>  <i>Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."</i></p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% of circumference. No developed areas within undisturbed part of buffer. .... Points = 5  (relatively undisturbed also means no-grazing) .....</p> <p><input type="checkbox"/> 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 50% circumference..... Points = 4</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% circumference..... Points = 4</p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 25% circumference..... Points = 3</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for &gt; 50% circumference. .... Points = 3</p> <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <p><input type="checkbox"/> No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland &gt; 95% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> No paved areas or buildings within 50m of wetland for &gt;50% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> Heavy grazing in buffer. .... Points = 1</p> <p><input type="checkbox"/> Vegetated buffers are &lt;2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland) ..... Points = 0</p> <p><input checked="" type="checkbox"/> <b>BUFFER DOES NOT MEET ANY OF THE CRITERIA ABOVE. POINTS = 1</b></p>	1
<p><b>H 2.2 Corridors and Connections (see p. 76)</b>  H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are</p>	1



Wetland name or number: Burke Gilman Wetland #5

*considered breaks in the corridor).*

YES = **4 points** (go to H 2.3)      NO = go to H 2.2.2

H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above?

YES = **2 points** (go to H 2.3)      NO = H 2.2.3

H 2.2.3 Is the wetland:

within 5 mi (8km) of a brackish or salt water estuary OR

within 3 mi of a large field or pasture (>40 acres) OR

\* within 1 mi of a lake greater than 20 acres?

**YES = 1 point**

**NO = 0 points**

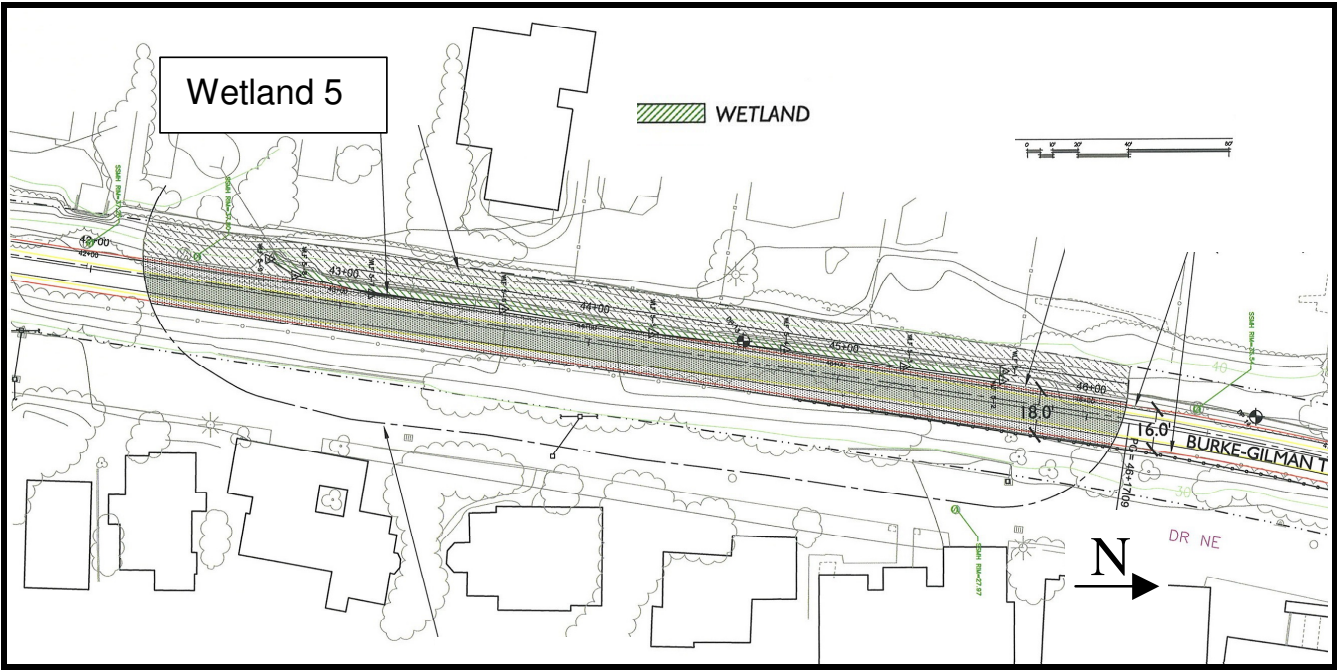
<p>H 2.3 Near or adjacent to other priority habitats listed by WDFW (<i>see p. 77</i>)</p> <p>Which of the following priority habitats are within 330ft (100m) of the wetland? (<i>see text for a more detailed description of these priority habitats</i>)</p> <p><input type="checkbox"/> <b>Riparian:</b> The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> <b>Aspen Stands:</b> Pure or mixed stands of aspen greater than 0.8 ha (2 acres).</p> <p><input type="checkbox"/> <b>Cliffs:</b> Greater than 7.6 m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> <b>Old-growth forests:</b> (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) &gt; 81 cm (32 in) dbh or &gt; 200 years of age.</p> <p><input type="checkbox"/> <b>Mature forests:</b> Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.</p> <p><input type="checkbox"/> <b>Prairies:</b> Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> <b>Talus:</b> Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> <b>Caves:</b> A naturally occurring cavity, recess, void, or system of interconnected passages</p> <p><input type="checkbox"/> <b>Oregon white Oak:</b> Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input checked="" type="checkbox"/> <b>Urban Natural Open Space:</b> A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> <b>Estuary/Estuary-like:</b> Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> <b>Marine/Estuarine Shorelines:</b> Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has <b>3 or more</b> priority habitats = <b>4 points</b>          If wetland has <b>2</b> priority habitats = <b>3 points</b>          If wetland has <b>1</b> priority habitat = <b>1 point</b>          No habitats = <b>0 points</b></p>	1
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Wetland name or number: Burke Gilman Wetland #5

<p><b>H 2.4 Wetland Landscape</b> (<i>choose the <b>one</b> description of the landscape around the wetland that best fits</i>)  <i>(see p. 79)</i></p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. .... points = 5</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3</p> <p>The wetland is Lake-fringe on a lake <b>with</b> disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3</p> <p>There is at least 1 wetland within ½ mile. .... points = 2</p> <p>There are no wetlands within ½ mile. .... points = 0</p>	3
<p><b>H 2. TOTAL Score</b> - opportunity for providing habitat  <i>Add the scores in the column above</i></p>	6
<p><b>Total Score for Habitat Functions</b> – add the points for H 1, H 2 and record the result on p. 1</p>	7

Wetland name or number: Burke Gilman Wetland #5

**Figure 5 – CAD Drawing of Wetland 5**



**Figure 6 – Cowardin Classes**



 **Approximate wetland boundary**



FIGURE 7 – HYDROPERIODS



Figure 8 – Aerial Photo Showing Buffers



Wetland name or number: Burke Gilman Wetland #5

 **300-foot buffer reference line**

Wetland name or number Burke Gilman Wetland #6

## WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland Burke Gilman Wetland #6 Date of site visit August 23, 2007

Rated by Jenni Creveling Trained by Ecology? Yes ☒ No ☐ Date of Training 4/06

SEC: 15 TWSHP: 26N RGE: 04E Is S/T/R in Appendix D Yes ☐ No ☒

Map of wetland unit: Figure 9 Estimated Size       

### SUMMARY OF RATING

#### Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☐ IV ☒

Category I = Score >70  
Category II = Score 51-69  
Category III = Score 30-50  
Category IV = Score < 30

Score for Water Quality Functions

14

Score for Hydrologic Functions

5

Score for Habitat Functions

7

TOTAL score for functions

26

#### Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the “highest” category from above)

IV

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class	
Estuarine	Depressional	X
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above	Check if unit has multiple HGM classes present	<input type="checkbox"/>

**Does the wetland unit being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	<u>YES</u>	<u>NO</u>
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered <b>animal</b> or <b>plant</b> species (T/E species)?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.</u>		<u>X</u>
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered <b>animal</b> species?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).</u>		<u>X</u>
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		<u>X</u>
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.



## Classification of Wetland Units in Western Washington

**If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.**

**1.** Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ **NO** – go to 2

☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. ).

**2.** The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ **NO** – go to 3

☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

**3.** Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒ **NO** – go to 4

☐ **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

**4.** Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

*NOTE: Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ **NO** – go to 5

☐ **YES** – The wetland class is **Slope**

**10.** Does the entire wetland unit **meet all** of the following criteria?

Wetland name or number Burke Gilman Wetland #6

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

*NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.*

☒ **NO - go to 6** ☐ **YES – The wetland class is *Riverine***

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7

☒ **YES – The wetland class is **Depressional****

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8

☐ **YES – The wetland class is **Depressional****

**8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.**

<i>HGM classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
<b>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality</b>		
D	<b>D 1. Does the wetland have the potential to improve water quality?</b> (see p. 38)	
D	<p>D 1.1 Characteristics of surface water flows out of the wetland:</p> <p>Unit is a depression with no surface water leaving it (no outlet)..... points = 3</p> <p>Unit has an intermittently flowing, or highly constricted permanently flowing outlet.... points = 2</p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 1</p> <p>Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b>, and/or outlet is a man-made ditch ..... points = 1</p> <p>(If ditch is not permanently flowing treat unit as "intermittently flowing")</p> <p>Provide photo or drawing</p>	Figure 9 2
D	<p>D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (<i>use NRCS definitions</i>).</p> <p>YES points = 4</p> <p>NO points = 0</p>	0
D	<p>D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class):</p> <p>Wetland has persistent, ungrazed, vegetation &gt;= 95% of area ..... points = 5</p> <p>Wetland has persistent, ungrazed, vegetation &gt;= 1/2 of area ..... points = 3</p> <p>Wetland has persistent, ungrazed vegetation &gt;= 1/10 of area ..... points = 1</p> <p>Wetland has persistent, ungrazed vegetation &lt;1/10 of area..... points = 0</p> <p>Map of Cowardin vegetation classes</p>	Figure 10 5
D	<p>D1.4 Characteristics of seasonal ponding or inundation.</p> <p><i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i></p> <p>Area seasonally ponded is &gt; 1/2 total area of wetland..... points = 4</p> <p>Area seasonally ponded is &gt; 1/4 total area of wetland..... points = 2</p> <p>Area seasonally ponded is &lt; 1/4 total area of wetland..... points = 0</p> <p>NOTE: See text for indicators of seasonal and permanent inundation.</p> <p>Map of hydroperiods</p>	Figure 11 0
D	<p><b>Total for D 1</b> Add the points in the boxes above</p>	7
D	<p><b>D 2. Does the wetland unit have the opportunity to improve water quality?</b> (see p. 44)</p> <p>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i></p> <p><input type="checkbox"/> Grazing in the wetland or within 150 ft</p> <p><input checked="" type="checkbox"/> Untreated stormwater discharges to wetland</p> <p><input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland</p> <p><input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging</p> <p><input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland</p> <p><input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen</p> <p><input type="checkbox"/> Other _____</p> <p>YES multiply score in D 1. by 2      NO multiply score in D 1. by 1</p>	multiplier 2
D	<p><b>TOTAL - Water Quality Functions</b> Multiply the score from D1 by D2</p> <p>Add score to table on p. 1</p>	14

HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation (see p. 46)		
<b>D</b>	<b>D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?</b> D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet)..... points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> )... points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> )... points = 0	2
<b>D</b>	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).</i> Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7 The wetland is a "headwater" wetland" ..... points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet ..... points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1 Marks of ponding less than 0.5 ft..... points = 0	0
<b>D</b>	D 3.3 Contribution of wetland unit to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit ..... points = 5 The area of the basin is 10 to 100 times the area of the unit ..... points = 3 The area of the basin is more than 100 times the area of the unit ..... points = 0 Entire unit is in the FLATS class ..... points = 5	3
<b>D</b>	<b>Total for D 3</b> <i>Add the points in the boxes above</i>	5
<b>D</b>	<b>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</b> (see p. 48) Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. <i>Note which of the following conditions apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ <input type="checkbox"/> YES multiplier is 2 <input checked="" type="checkbox"/> NO multiplier is 1	multiplier 1
<b>D</b>	<b>TOTAL - Hydrologic Functions</b> Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	5

**HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat****H 1. Does the wetland have the potential to provide habitat for many species?****H 1.1 Vegetation structure (see p. 68)**

Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.

- ☐ Aquatic bed  
☒ Emergent plants  
☐ Scrub/shrub (areas where shrubs have >30% cover)  
☐ Forested (areas where trees have >30% cover)  
☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)

Add the number of vegetation types that qualify. If you have:

4 types or more ..... points = 4  
 3 types ..... points = 2  
 2 types ..... points = 1  
 1 type ..... points = 0

0

**H 1.2. Hydroperiods (see p. 69)**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)

- ☐ Permanently flooded or inundated  
☒ Seasonally flooded or inundated  
☐ Occasionally flooded or inundated  
☒ Saturated only  
☐ Permanently flowing stream or river in, or adjacent to, the wetland  
☐ Seasonally flowing stream in, or adjacent to, the wetland  
☐ **Lake-fringe wetland = 2 points**  
☐ **Freshwater tidal wetland = 2 points**

4 or more types present ..... points = 3  
 3 types present ..... points = 2  
 2 types present ..... points = 1

1

**H 1.3. Richness of Plant Species (see p. 71)**

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

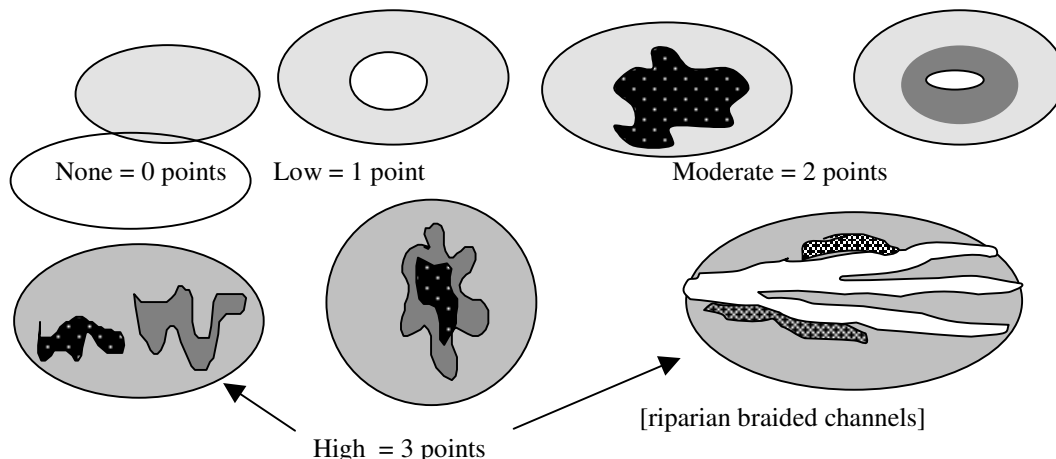
Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

If you counted: > 19 species ..... points = 2  
 5 - 19 species ..... points = 1  
 < 5 species ..... points = 0

0

**H 1.4. Interspersion of habitats (see p. 72)**

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



0

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is

always "high".	
<p><b>H 1.5. Special Habitat Features: (see p. 73)</b>  <i>Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt;4in. diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 inches) in the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt;30degree slope) OR signs of recent beaver activity are present</p> <p><input type="checkbox"/> At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (structures for egg-laying by amphibians)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants</p>	0
<p style="text-align: right;"><b>H 1. TOTAL</b> Score - potential for providing habitat</p> <p><b>Add the scores in the column above</b></p>	1
<b>H 2. DOES THE WETLAND HAVE THE OPPORTUNITY TO PROVIDE HABITAT FOR MANY SPECIES?</b>	
<p><b>H 2.1 Buffers (see p. 75)</b>  <i>Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."</i></p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% of circumference. No developed areas within undisturbed part of buffer. .... Points = 5  (relatively undisturbed also means no-grazing) .....</p> <p><input type="checkbox"/> 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 50% circumference..... Points = 4</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% circumference..... Points = 4</p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 25% circumference..... Points = 3</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for &gt; 50% circumference..... Points = 3</p> <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <p><input type="checkbox"/> No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland &gt; 95% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> No paved areas or buildings within 50m of wetland for &gt;50% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> Heavy grazing in buffer. .... Points = 1</p> <p><input type="checkbox"/> Vegetated buffers are &lt;2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland)..... Points = 0</p> <p><input checked="" type="checkbox"/> <b>BUFFER DOES NOT MEET ANY OF THE CRITERIA ABOVE. POINTS = 1</b></p>	1
<p><b>H 2.2 Corridors and Connections (see p. 76)</b>  H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are</p>	1

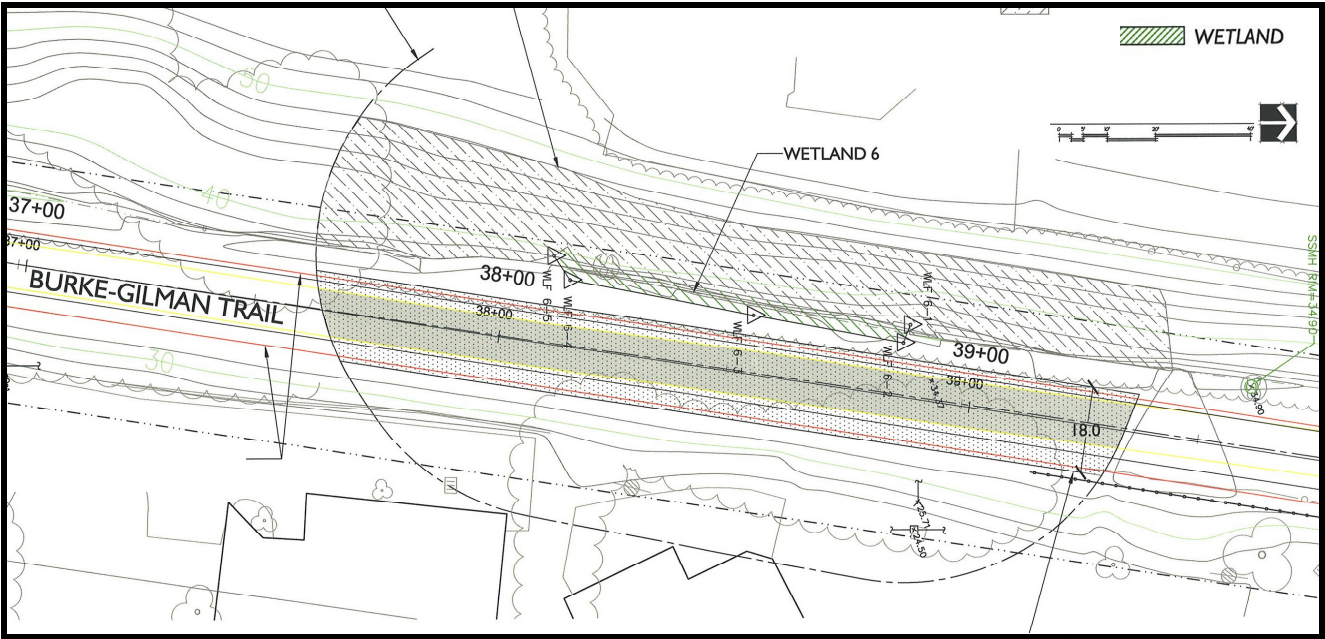
<p><i>considered breaks in the corridor).</i></p> <p>YES = <b>4 points</b> (go to H 2.3)      NO = go to H 2.2.2</p> <p>H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? <b>OR a Lake-fringe</b> wetland, if it does not have an undisturbed corridor as in the question above?</p> <p>YES = <b>2 points</b> (go to H 2.3)      NO = H 2.2.3</p> <p>H 2.2.3 Is the wetland:</p> <p>within 5 mi (8km) of a brackish or salt water estuary OR</p> <p>within 3 mi of a large field or pasture (&gt;40 acres) OR</p> <p>* within 1 mi of a lake greater than 20 acres?</p> <p><b>YES = 1 point</b>      NO = <b>0 points</b></p>	
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<p>H 2.3 Near or adjacent to other priority habitats listed by WDFW (<i>see p. 77</i>)</p> <p>Which of the following priority habitats are within 330ft (100m) of the wetland? (<i>see text for a more detailed description of these priority habitats</i>)</p> <p><input type="checkbox"/> <b>Riparian:</b> The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> <b>Aspen Stands:</b> Pure or mixed stands of aspen greater than 0.8 ha (2 acres).</p> <p><input type="checkbox"/> <b>Cliffs:</b> Greater than 7.6 m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> <b>Old-growth forests:</b> (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) &gt; 81 cm (32 in) dbh or &gt; 200 years of age.</p> <p><input type="checkbox"/> <b>Mature forests:</b> Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.</p> <p><input type="checkbox"/> <b>Prairies:</b> Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> <b>Talus:</b> Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> <b>Caves:</b> A naturally occurring cavity, recess, void, or system of interconnected passages</p> <p><input type="checkbox"/> <b>Oregon white Oak:</b> Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input checked="" type="checkbox"/> <b>Urban Natural Open Space:</b> A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> <b>Estuary/Estuary-like:</b> Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> <b>Marine/Estuarine Shorelines:</b> Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has <b>3 or more</b> priority habitats = <b>4 points</b>          If wetland has <b>2</b> priority habitats = <b>3 points</b>  <u>If wetland has <b>1</b> priority habitat = <b>1 point</b></u>          No habitats = <b>0 points</b></p>	<p>1</p>
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<p><b>H 2.4 Wetland Landscape</b> (<i>choose the <b>one</b> description of the landscape around the wetland that best fits</i>)  <i>(see p. 79)</i></p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. .... points = 5</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3</p> <p>The wetland is Lake-fringe on a lake <b>with</b> disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3</p> <p>There is at least 1 wetland within ½ mile. .... points = 2</p> <p>There are no wetlands within ½ mile. .... points = 0</p>	3
<p style="text-align: right;"><b>H 2. TOTAL Score</b> - opportunity for providing habitat  <i>Add the scores in the column above</i></p>	6
<p><b>Total Score for Habitat Functions</b> – add the points for H 1, H 2 and record the result on p. 1</p>	7

**Figure 9 – CAD Drawing of Wetland 6**



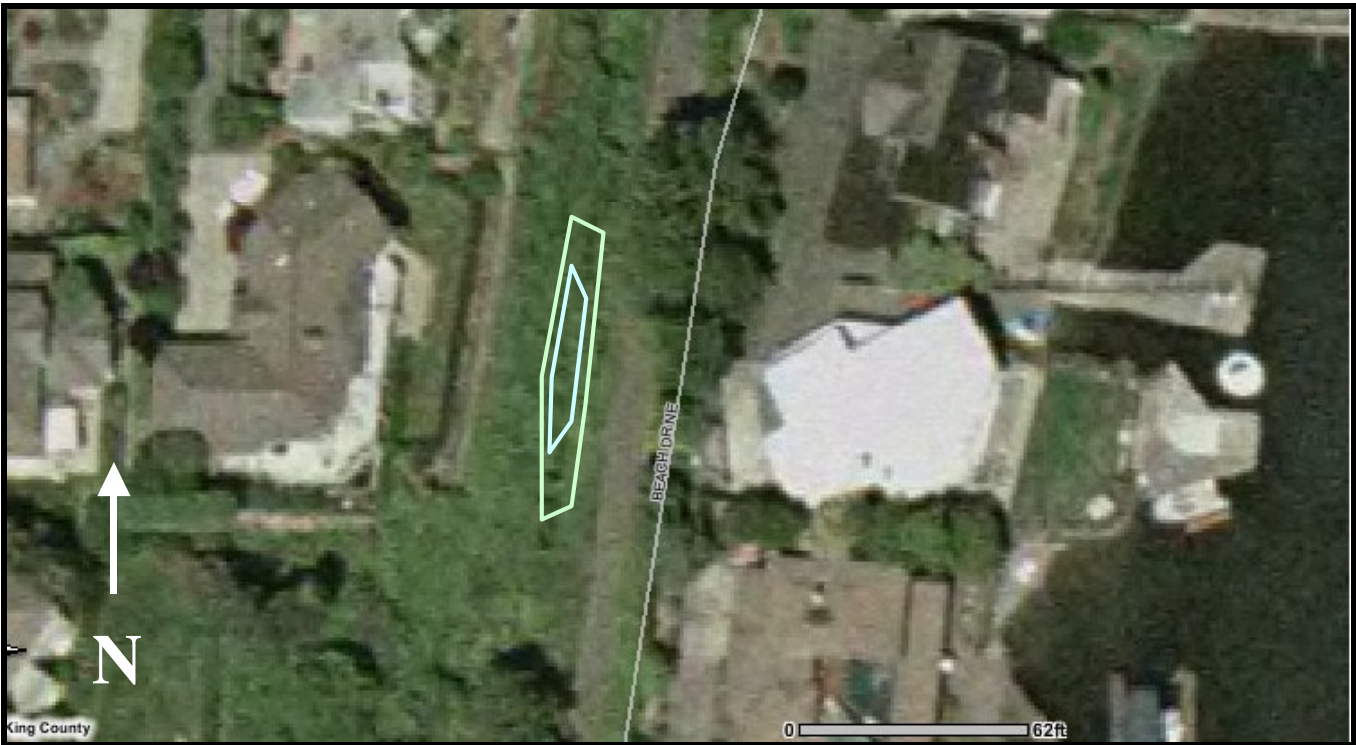
**Figure 10 – Cowardin Classes**



 **Approximate wetland boundary**



FIGURE 11 – HYDROPERIODS



 Estimated area of seasonal ponding/flooding, remainder is saturated only

Figure 12 – Aerial Photo Showing Buffers



 300-foot buffer reference line

Wetland name or number: Burke Gilman Wetland #7

## WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland Burke Gilman Wetland #7 Date of site visit August 23, 2007

Rated by Jenni Creveling Trained by Ecology? Yes ☒ No ☐ Date of Training 4/06

SEC: \_\_\_\_\_ TWNSHP: \_\_\_\_\_ RNGE: \_\_\_\_\_ Is S/T/R in Appendix D Yes ☐ No ☐

Map of wetland unit: Figure \_\_\_\_ Estimated Size \_\_\_\_

### SUMMARY OF RATING

#### Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☐ IV ☒

Category I = Score >70  
Category II = Score 51-69  
Category III = Score 30-50  
Category IV = Score < 30

Score for Water Quality Functions

14

Score for Hydrologic Functions

5

Score for Habitat Functions

7

**TOTAL score for functions**

**26**

#### Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

Final Category (choose the “highest” category from above)

**IV**

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class	
Estuarine	Depressional	X
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above	Check if unit has multiple HGM classes present	<input type="checkbox"/>

**Does the wetland unit being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	<u>YES</u>	<u>NO</u>
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered <b>animal</b> or <b>plant</b> species (T/E species)?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.</u>		<u>X</u>
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered <b>animal</b> species?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).</u>		<u>X</u>
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		<u>X</u>
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

## Classification of Wetland Units in Western Washington

**If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.**

**1.** Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ **NO** – go to 2

☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland. Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. ).*

**2.** The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ **NO** – go to 3

☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

**3.** Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒ **NO** – go to 4

☐ **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

**4.** Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

*NOTE: Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ **NO** – go to 5

☐ **YES** – The wetland class is **Slope**

**11.** Does the entire wetland unit **meet all** of the following criteria?

Wetland name or number: Burke Gilman Wetland #7

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

*NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.*

☒ **NO - go to 6** ☐ **YES – The wetland class is *Riverine***

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO – go to 7

☒ **YES – The wetland class is **Depressional****

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO – go to 8

☐ **YES – The wetland class is **Depressional****

**8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.**

<i>HGM classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
<b>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality</b>		
D	<b>D 1. Does the wetland have the potential to improve water quality?</b> (see p. 38)	
D	<p>D 1.1 Characteristics of surface water flows out of the wetland:</p> <p>Unit is a depression with no surface water leaving it (no outlet)..... points = 3</p> <p>Unit has an intermittently flowing, or highly constricted permanently flowing outlet.... points = 2</p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 1</p> <p>Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b>, and/or outlet is a man-made ditch ..... points = 1</p> <p>(If ditch is not permanently flowing treat unit as "intermittently flowing")</p> <p>Provide photo or drawing</p>	2
D	<p>D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (<i>use NRCS definitions</i>).</p> <p>YES points = 4</p> <p>NO points = 0</p>	0
D	<p>D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class):</p> <p>Wetland has persistent, ungrazed, vegetation &gt; = 95% of area ..... points = 5</p> <p>Wetland has persistent, ungrazed, vegetation &gt; = 1/2 of area ..... points = 3</p> <p>Wetland has persistent, ungrazed vegetation &gt; = 1/10 of area ..... points = 1</p> <p>Wetland has persistent, ungrazed vegetation &lt; 1/10 of area..... points = 0</p> <p>Map of Cowardin vegetation classes</p>	3
D	<p>D1.4 Characteristics of seasonal ponding or inundation.</p> <p><i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i></p> <p>Area seasonally ponded is &gt; ½ total area of wetland..... points = 4</p> <p>Area seasonally ponded is &gt; ¼ total area of wetland..... points = 2</p> <p>Area seasonally ponded is &lt; ¼ total area of wetland..... points = 0</p> <p>NOTE: See text for indicators of seasonal and permanent inundation.</p> <p>Map of hydroperiods</p>	2
D	<p><b>Total for D 1</b> Add the points in the boxes above</p>	7
D	<p><b>D 2. Does the wetland unit have the opportunity to improve water quality?</b> (see p. 44)</p> <p>Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i></p> <p><input type="checkbox"/> Grazing in the wetland or within 150 ft</p> <p><input checked="" type="checkbox"/> Untreated stormwater discharges to wetland</p> <p><input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland</p> <p><input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging</p> <p><input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland</p> <p><input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen</p> <p><input type="checkbox"/> Other _____</p> <p>YES multiply score in D 1. by 2      NO multiply score in D 1. by 1</p>	multiplier 2
D	<p><b>TOTAL - Water Quality Functions</b> Multiply the score from D1 by D2</p> <p>Add score to table on p. 1</p>	14



HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation (see p. 46)		
<b>D</b>	<b>D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?</b> D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet)..... points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> )... points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> )... points = 0	2
<b>D</b>	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).</i> Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7 The wetland is a "headwater" wetland" ..... points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet ..... points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1 Marks of ponding less than 0.5 ft..... points = 0	0
<b>D</b>	D 3.3 Contribution of wetland unit to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit ..... points = 5 The area of the basin is 10 to 100 times the area of the unit ..... points = 3 The area of the basin is more than 100 times the area of the unit ..... points = 0 Entire unit is in the FLATS class ..... points = 5	3
<b>D</b>	<b>Total for D 3</b> <i>Add the points in the boxes above</i>	5
<b>D</b>	<b>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</b> (see p. 48) Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. <i>Note which of the following conditions apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ <input type="checkbox"/> YES multiplier is 2 <input checked="" type="checkbox"/> NO multiplier is 1	multiplier 1
<b>D</b>	<b>TOTAL - Hydrologic Functions</b> Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	5

**HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat****H 1. Does the wetland have the potential to provide habitat for many species?****H 1.1 Vegetation structure (see p. 68)**

Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.

- ☐ Aquatic bed  
☒ Emergent plants  
☐ Scrub/shrub (areas where shrubs have >30% cover)  
☐ Forested (areas where trees have >30% cover)  
☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)

Add the number of vegetation types that qualify. If you have:

- 4 types or more ..... points = 4  
 3 types ..... points = 2  
 2 types ..... points = 1  
 1 type ..... points = 0

0

**H 1.2. Hydroperiods (see p. 69)**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)

- ☐ Permanently flooded or inundated  
☒ Seasonally flooded or inundated  
☐ Occasionally flooded or inundated  
☒ Saturated only  
☐ Permanently flowing stream or river in, or adjacent to, the wetland  
☐ Seasonally flowing stream in, or adjacent to, the wetland  
☐ **Lake-fringe wetland = 2 points**  
☐ **Freshwater tidal wetland = 2 points**

- 4 or more types present ..... points = 3  
 3 types present ..... points = 2  
 2 types present ..... points = 1

1

**H 1.3. Richness of Plant Species (see p. 71)**

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

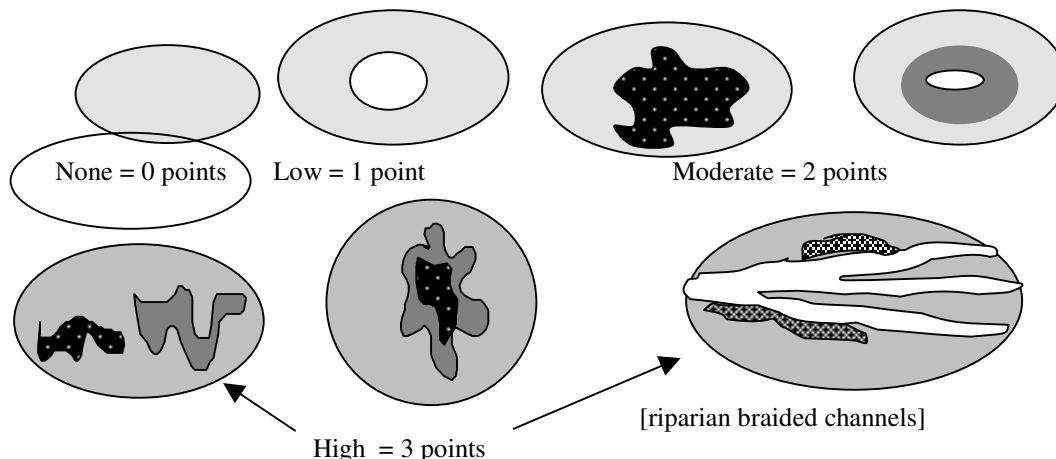
Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

- If you counted: > 19 species ..... points = 2  
 5 - 19 species ..... points = 1  
 < 5 species ..... points = 0

0

**H 1.4. Interspersion of habitats (see p. 72)**

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



0

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is

always "high".	
<b>H 1.5. Special Habitat Features: (see p. 73)</b> <i>Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt;4in. diameter and 6 ft long).</li> <li><input type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 inches) in the wetland</li> <li><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m)</li> <li><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt;30degree slope) OR signs of recent beaver activity are present</li> <li><input type="checkbox"/> At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (structures for egg-laying by amphibians)</li> <li><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants</li> </ul>	0
<b>Add the scores in the column above</b>	<b>H 1. TOTAL Score - potential for providing habitat</b> 1
<b>H 2. DOES THE WETLAND HAVE THE OPPORTUNITY TO PROVIDE HABITAT FOR MANY SPECIES?</b>	
<b>H 2.1 Buffers (see p. 75)</b> <i>Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% of circumference. No developed areas within undisturbed part of buffer. .... Points = 5</li> <li><input type="checkbox"/> 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 50% circumference..... Points = 4</li> <li><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% circumference..... Points = 4</li> <li><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 25% circumference..... Points = 3</li> <li><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for &gt; 50% circumference. .... Points = 3</li> <li>If buffer does not meet any of the three criteria above</li> <li><input type="checkbox"/> No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland &gt; 95% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</li> <li><input type="checkbox"/> No paved areas or buildings within 50m of wetland for &gt;50% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</li> <li><input type="checkbox"/> Heavy grazing in buffer. .... Points = 1</li> <li><input type="checkbox"/> Vegetated buffers are &lt;2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland) ..... Points = 0</li> <li><input checked="" type="checkbox"/> <b>BUFFER DOES NOT MEET ANY OF THE CRITERIA ABOVE. POINTS = 1</b></li> </ul>	1
<b>H 2.2 Corridors and Connections (see p. 76)</b> <b>H 2.2.1</b> Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are	1

Wetland name or number: Burke Gilman Wetland #7

*considered breaks in the corridor).*

YES = **4 points** (go to H 2.3)      NO = go to H 2.2.2

H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above?

YES = **2 points** (go to H 2.3)      NO = H 2.2.3

H 2.2.3 Is the wetland:

within 5 mi (8km) of a brackish or salt water estuary OR

within 3 mi of a large field or pasture (>40 acres) OR

\* within 1 mi of a lake greater than 20 acres?

**YES = 1 point**

**NO = 0 points**

<p>H 2.3 Near or adjacent to other priority habitats listed by WDFW (<i>see p. 77</i>)</p> <p>Which of the following priority habitats are within 330ft (100m) of the wetland? (<i>see text for a more detailed description of these priority habitats</i>)</p> <p><input type="checkbox"/> <b>Riparian:</b> The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> <b>Aspen Stands:</b> Pure or mixed stands of aspen greater than 0.8 ha (2 acres).</p> <p><input type="checkbox"/> <b>Cliffs:</b> Greater than 7.6 m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> <b>Old-growth forests:</b> (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) &gt; 81 cm (32 in) dbh or &gt; 200 years of age.</p> <p><input type="checkbox"/> <b>Mature forests:</b> Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.</p> <p><input type="checkbox"/> <b>Prairies:</b> Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> <b>Talus:</b> Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> <b>Caves:</b> A naturally occurring cavity, recess, void, or system of interconnected passages</p> <p><input type="checkbox"/> <b>Oregon white Oak:</b> Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input checked="" type="checkbox"/> <b>Urban Natural Open Space:</b> A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> <b>Estuary/Estuary-like:</b> Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> <b>Marine/Estuarine Shorelines:</b> Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has <b>3 or more</b> priority habitats = <b>4 points</b>          If wetland has <b>2</b> priority habitats = <b>3 points</b>          If wetland has <b>1</b> priority habitat = <b>1 point</b>          No habitats = <b>0 points</b></p>	<p>1</p>
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Wetland name or number: Burke Gilman Wetland #7

<p><b>H 2.4 Wetland Landscape</b> (<i>choose the <b>one</b> description of the landscape around the wetland that best fits</i>)  <i>(see p. 79)</i></p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. .... points = 5</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3</p> <p>The wetland is Lake-fringe on a lake <b>with</b> disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3</p> <p>There is at least 1 wetland within ½ mile. .... points = 2</p> <p>There are no wetlands within ½ mile. .... points = 0</p>	3
<p><b>H 2. TOTAL Score</b> - opportunity for providing habitat  <i>Add the scores in the column above</i></p>	6
<p><b>Total Score for Habitat Functions</b> – add the points for H 1, H 2 and record the result on p. 1</p>	7

Wetland name or number: Burke Gilman Wetland #8

## WETLAND RATING FORM – WESTERN WASHINGTON

Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland Burke Gilman Wetland #8 Date of site visit August 23, 2007

Rated by Jenni Creveling Trained by Ecology? Yes ☒ No ☐ Date of Training 4/06

SEC: 15 TWSHP: 26N RGE: 04E Is S/T/R in Appendix D Yes ☐ No ☒

**Map of wetland unit: Figure 13 Estimated Size \_\_\_\_\_**

### SUMMARY OF RATING

#### Category based on FUNCTIONS provided by wetland

I ☐ II ☐ III ☐ IV ☒

Category I = Score >70  
Category II = Score 51-69  
Category III = Score 30-50  
Category IV = Score < 30

Score for Water Quality Functions

14

Score for Hydrologic Functions

5

Score for Habitat Functions

7

**TOTAL score for functions**

**26**

#### Category based on SPECIAL CHARACTERISTICS of wetland

I ☐ II ☐ Does not Apply ☒

**Final Category (choose the “highest” category from above)**

**IV**

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class	
Estuarine	Depressional	X
Natural Heritage Wetland	Riverine	
Bog	Lake-fringe	
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above	Check if unit has multiple HGM classes present	X

**Does the wetland unit being rated meet any of the criteria below?**

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	<u>YES</u>	<u>NO</u>
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered <b>animal</b> or <b>plant</b> species (T/E species)?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.</u>		<u>X</u>
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered <b>animal</b> species?</i> <u>For the purposes of this rating system, “documented” means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).</u>		<u>X</u>
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>		<u>X</u>
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.		X

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.



## Classification of Wetland Units in Western Washington

**If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.**

**1.** Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?

☒ **NO** – go to 2

☐ **YES** – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p. ).

**2.** The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit

☒ **NO** – go to 3

☐ **YES** – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

**3.** Does the entire wetland unit **meet both** of the following criteria?

☐ The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;

☐ At least 30% of the open water area is deeper than 6.6 ft (2 m)?

☒ **NO** – go to 4

☐ **YES** – The wetland class is **Lake-fringe (Lacustrine Fringe)**

**4.** Does the entire wetland unit **meet all** of the following criteria?

☐ The wetland is on a slope (*slope can be very gradual*),

☐ The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.

☐ The water leaves the wetland **without being impounded**?

*NOTE: Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*

☒ **NO** – go to 5

☐ **YES** – The wetland class is **Slope**

**12.** Does the entire wetland unit **meet all** of the following criteria?

Wetland name or number: Burke Gilman Wetland #8

☐ The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.

☐ The overbank flooding occurs at least once every two years

*NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.*

☒ **NO - go to 6** ☐ **YES - The wetland class is *Riverine***

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

☐ NO - go to 7

☒ **YES - The wetland class is **Depressional****

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

☐ NO - go to 8

☐ **YES - The wetland class is **Depressional****

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT (make a rough sketch to help you decide).** Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. **NOTE: Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.**

<i>HGM classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional *	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

***\*Wetland 8 is probably an old "slump" that has exposed subsurface seepage (trees on either side).***

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
<b>WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality</b>		
D	<b>D 1. Does the wetland have the potential to improve water quality?</b>	(see p. 38)
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet)..... points = 3 Unit has an intermittently flowing, or highly constricted permanently flowing outlet.... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Provide photo or drawing	<b>Figure 13</b>  2
D	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic ( <i>use NRCS definitions</i> ). YES points = 4 NO points = 0	0
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): Wetland has persistent, ungrazed, vegetation >= 95% of area ..... points = 5 Wetland has persistent, ungrazed, vegetation >= 1/2 of area ..... points = 3 Wetland has persistent, ungrazed vegetation >= 1/10 of area ..... points = 1 Wetland has persistent, ungrazed vegetation <1/10 of area..... points = 0 Map of Cowardin vegetation classes	<b>Figure 14</b>  5
D	D1.4 Characteristics of seasonal ponding or inundation. <i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i> Area seasonally ponded is > 1/2 total area of wetland..... points = 4 Area seasonally ponded is > 1/4 total area of wetland..... points = 2 Area seasonally ponded is < 1/4 total area of wetland..... points = 0 NOTE: See text for indicators of seasonal and permanent inundation. Map of hydroperiods	<b>Figure 15</b>  0
D	<b>Total for D 1</b> <i>Add the points in the boxes above</i>	7
D	<b>D 2. Does the wetland unit have the opportunity to improve water quality?</b> Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i> <input type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input type="checkbox"/> Tilled fields or orchards within 150 ft of wetland <input type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen <input type="checkbox"/> Other _____ <b>YES</b> multiply score in D 1. by 2 <b>NO</b> multiply score in D 1. by 1	(see p. 44)  multiplier 2
D	<b>TOTAL - Water Quality Functions</b> Multiply the score from D1 by D2 <i>Add score to table on p. 1</i>	14

HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation (see p. 46)		
<b>D</b>	<b>D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?</b> D 3.1 Characteristics of surface water flows out of the wetland unit Unit is a depression with no surface water leaving it (no outlet)..... points = 4 Unit has an intermittently flowing, or highly constricted permanently flowing outlet... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 1 Unit is a "flat" depression (Q.7 on key), or in the Flats class, with permanent surface outflow <b>and no obvious natural outlet</b> , and/or outlet is a man-made ditch ..... points = 1 (If ditch is not permanently flowing treat unit as "intermittently flowing") Unit has an unconstricted, or slightly constricted, surface outlet ( <i>permanently flowing</i> ). points = 0	2
<b>D</b>	D 3.2 Depth of storage during wet periods <i>Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).</i> Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7 The wetland is a "headwater" wetland" ..... points = 5 Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5 Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet ..... points = 3 Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water ..... points = 1 Marks of ponding less than 0.5 ft..... points = 0	0
<b>D</b>	D 3.3 Contribution of wetland unit to storage in the watershed <i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i> The area of the basin is less than 10 times the area of the unit ..... points = 5 The area of the basin is 10 to 100 times the area of the unit ..... points = 3 The area of the basin is more than 100 times the area of the unit ..... points = 0 Entire unit is in the FLATS class ..... points = 5	3
<b>D</b>	<b>Total for D 3</b> <i>Add the points in the boxes above</i>	5
<b>D</b>	<b>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</b> <i>(see p. 48)</i> Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur. <i>Note which of the following conditions apply.</i> <input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems <input type="checkbox"/> Wetland drains to a river or stream that has flooding problems <input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems <input type="checkbox"/> Other _____ <input type="checkbox"/> YES multiplier is 2 <input checked="" type="checkbox"/> NO multiplier is 1	multiplier 1
<b>D</b>	<b>TOTAL - Hydrologic Functions</b> Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	5

**HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat****H 1. Does the wetland have the potential to provide habitat for many species?****H 1.1 Vegetation structure (see p. 68)**

Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.

- ☐ Aquatic bed  
☒ Emergent plants  
☐ Scrub/shrub (areas where shrubs have >30% cover)  
☐ Forested (areas where trees have >30% cover)  
☐ Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover)

Add the number of vegetation types that qualify. If you have:

4 types or more ..... points = 4  
 3 types ..... points = 2  
 2 types ..... points = 1  
 1 type ..... points = 0

0

**H 1.2. Hydroperiods (see p. 69)**

Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)

- ☐ Permanently flooded or inundated  
☒ Seasonally flooded or inundated  
☐ Occasionally flooded or inundated  
☒ Saturated only  
☐ Permanently flowing stream or river in, or adjacent to, the wetland  
☐ Seasonally flowing stream in, or adjacent to, the wetland  
☐ **Lake-fringe wetland = 2 points**  
☐ **Freshwater tidal wetland = 2 points**

4 or more types present ..... points = 3  
 3 types present ..... points = 2  
 2 types present ..... points = 1

1

**H 1.3. Richness of Plant Species (see p. 71)**

Count the number of plant species in the wetland that cover at least 10 ft<sup>2</sup>. (different patches of the same species can be combined to meet the size threshold)

You do not have to name the species.

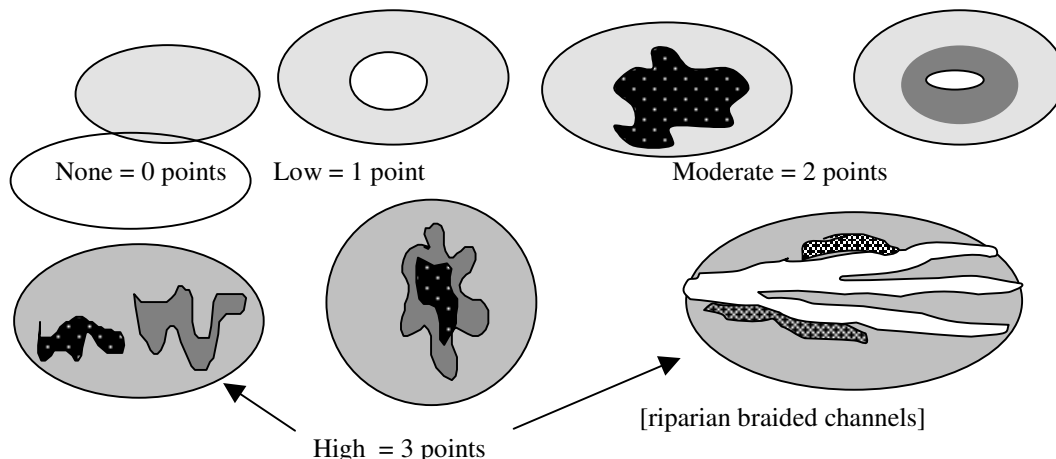
Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle

If you counted: > 19 species ..... points = 2  
 5 - 19 species ..... points = 1  
 < 5 species ..... points = 0

0

**H 1.4. Interspersion of habitats (see p. 72)**

Decided from the diagrams below whether interspersion between types of vegetation (described in H 1.1), or vegetation types and unvegetated areas (can include open water or mudflats) is high, medium, low, or none.



0

NOTE: If you have four or more vegetation types or three vegetation types and open water the rating is

always "high".	
<p><b>H 1.5. Special Habitat Features: (see p. 73)</b>  <i>Check the habitat features that are present in the wetland. The number of checks is the number of points you put into the next column.</i></p> <p><input type="checkbox"/> Large, downed, woody debris within the wetland (&gt;4in. diameter and 6 ft long).</p> <p><input type="checkbox"/> Standing snags (diameter at the bottom &gt; 4 inches) in the wetland</p> <p><input type="checkbox"/> Undercut banks are present for at least 6.6 ft (2m) and/or overhanging vegetation extends at least 3.3 ft (1m) over a stream for at least 33 ft (10m)</p> <p><input type="checkbox"/> Stable steep banks of fine material that might be used by beaver or muskrat for denning (&gt;30degree slope) OR signs of recent beaver activity are present</p> <p><input type="checkbox"/> At least ¼ acre of thin-stemmed persistent vegetation or woody branches are present in areas that are permanently or seasonally inundated. (structures for egg-laying by amphibians)</p> <p><input type="checkbox"/> Invasive plants cover less than 25% of the wetland area in each stratum of plants</p>	0
<p style="text-align: right;"><b>H 1. TOTAL</b> Score - potential for providing habitat</p> <p><b>Add the scores in the column above</b></p>	1
<b>H 2. DOES THE WETLAND HAVE THE OPPORTUNITY TO PROVIDE HABITAT FOR MANY SPECIES?</b>	
<p><b>H 2.1 Buffers (see p. 75)</b>  <i>Choose the description that best represents condition of buffer of wetland. The highest scoring criterion that applies to the wetland is to be used in the rating. See text for definition of "undisturbed."</i></p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% of circumference. No developed areas within undisturbed part of buffer. .... Points = 5  (relatively undisturbed also means no-grazing) .....</p> <p><input type="checkbox"/> 100 m (330 ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 50% circumference..... Points = 4</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt;95% circumference..... Points = 4</p> <p><input type="checkbox"/> 100 m (330ft) of relatively undisturbed vegetated areas, rocky areas, or open water &gt; 25% circumference..... Points = 3</p> <p><input type="checkbox"/> 50 m (170ft) of relatively undisturbed vegetated areas, rocky areas, or open water for &gt; 50% circumference. .... Points = 3</p> <p style="text-align: center;">If buffer does not meet any of the three criteria above</p> <p><input type="checkbox"/> No paved areas (except paved trails) or buildings within 25 m (80ft) of wetland &gt; 95% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> No paved areas or buildings within 50m of wetland for &gt;50% circumference. Light to moderate grazing, or lawns are OK..... Points = 2</p> <p><input type="checkbox"/> Heavy grazing in buffer. .... Points = 1</p> <p><input type="checkbox"/> Vegetated buffers are &lt;2m wide (6.6ft) for more than 95% of the circumference (e.g. tilled fields, paving, basalt bedrock extend to edge of wetland) .... Points = 0</p> <p><input checked="" type="checkbox"/> <b>BUFFER DOES NOT MEET ANY OF THE CRITERIA ABOVE. POINTS = 1</b></p>	1
<p><b>H 2.2 Corridors and Connections (see p. 76)</b>  H 2.2.1 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 150 ft wide, has at least 30% cover of shrubs, forest or native undisturbed prairie, that connects to estuaries, other wetlands or undisturbed uplands that are at least 250 acres in size? (dams in riparian corridors, heavily used gravel roads, paved roads, are</p>	1

Wetland name or number: Burke Gilman Wetland #8

*considered breaks in the corridor).*

YES = **4 points** (go to H 2.3)      NO = go to H 2.2.2

H 2.2.2 Is the wetland part of a relatively undisturbed and unbroken vegetated corridor (either riparian or upland) that is at least 50ft wide, has at least 30% cover of shrubs or forest, and connects to estuaries, other wetlands or undisturbed uplands that are at least 25 acres in size? **OR a Lake-fringe** wetland, if it does not have an undisturbed corridor as in the question above?

YES = **2 points** (go to H 2.3)      NO = H 2.2.3

H 2.2.3 Is the wetland:

within 5 mi (8km) of a brackish or salt water estuary OR

within 3 mi of a large field or pasture (>40 acres) OR

\* within 1 mi of a lake greater than 20 acres?

**YES = 1 point**

**NO = 0 points**

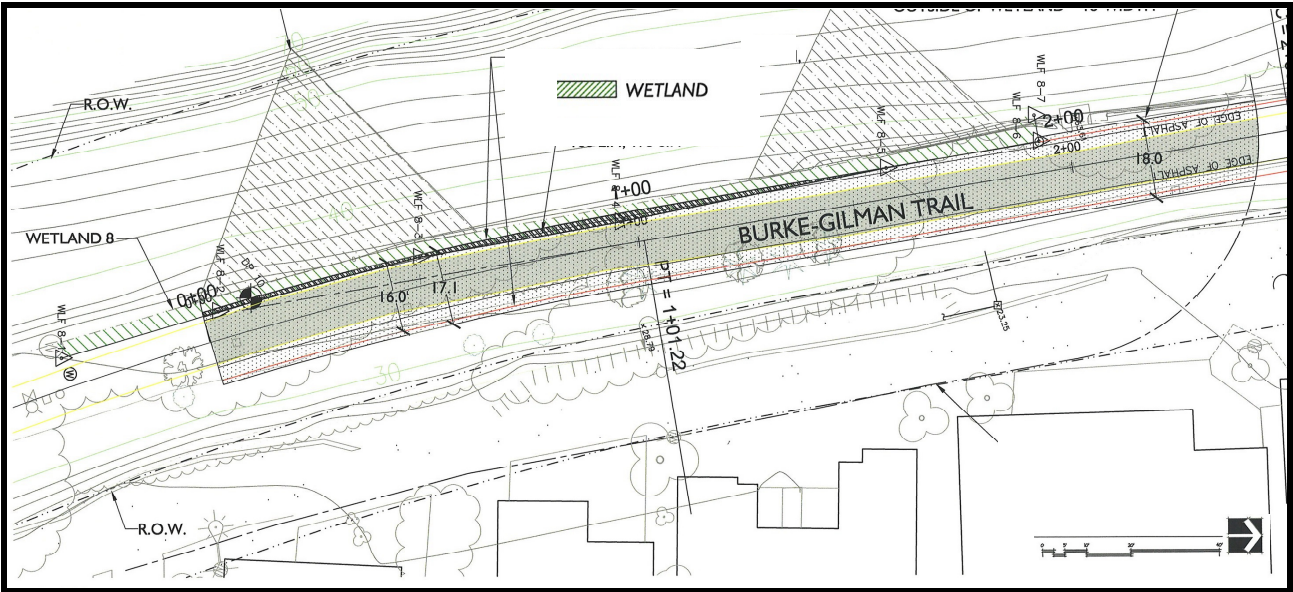
<p>H 2.3 Near or adjacent to other priority habitats listed by WDFW (<i>see p. 77</i>)</p> <p>Which of the following priority habitats are within 330ft (100m) of the wetland? (<i>see text for a more detailed description of these priority habitats</i>)</p> <p><input type="checkbox"/> <b>Riparian:</b> The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> <b>Aspen Stands:</b> Pure or mixed stands of aspen greater than 0.8 ha (2 acres).</p> <p><input type="checkbox"/> <b>Cliffs:</b> Greater than 7.6 m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> <b>Old-growth forests:</b> (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) &gt; 81 cm (32 in) dbh or &gt; 200 years of age.</p> <p><input type="checkbox"/> <b>Mature forests:</b> Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.</p> <p><input type="checkbox"/> <b>Prairies:</b> Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> <b>Talus:</b> Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> <b>Caves:</b> A naturally occurring cavity, recess, void, or system of interconnected passages</p> <p><input type="checkbox"/> <b>Oregon white Oak:</b> Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input checked="" type="checkbox"/> <b>Urban Natural Open Space:</b> A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> <b>Estuary/Estuary-like:</b> Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> <b>Marine/Estuarine Shorelines:</b> Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has <b>3 or more</b> priority habitats = <b>4 points</b>          If wetland has <b>2</b> priority habitats = <b>3 points</b>          If wetland has <b>1</b> priority habitat = <b>1 point</b>          No habitats = <b>0 points</b></p>	1
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Wetland name or number: Burke Gilman Wetland #8

<p><b>H 2.4 Wetland Landscape</b> (<i>choose the <b>one</b> description of the landscape around the wetland that best fits</i>)  <i>(see p. 79)</i></p> <p>There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. .... points = 5</p> <p>The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile ..... points = 5</p> <p>There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed ..... points = 3</p> <p>The wetland is Lake-fringe on a lake <b>with</b> disturbance and there are 3 other lake-fringe wetland within ½ mile ..... points = 3</p> <p>There is at least 1 wetland within ½ mile. .... points = 2</p> <p>There are no wetlands within ½ mile. .... points = 0</p>	3
<p><b>H 2. TOTAL Score</b> - opportunity for providing habitat  <i>Add the scores in the column above</i></p>	6
<p><b>Total Score for Habitat Functions</b> – add the points for H 1, H 2 and record the result on p. 1</p>	7

**Figure 13 – CAD Drawing of Wetland 8**



**Figure 14 – Cowardin Classes**



**Approximate wetland boundary**



FIGURE 15 – HYDROPERIODS

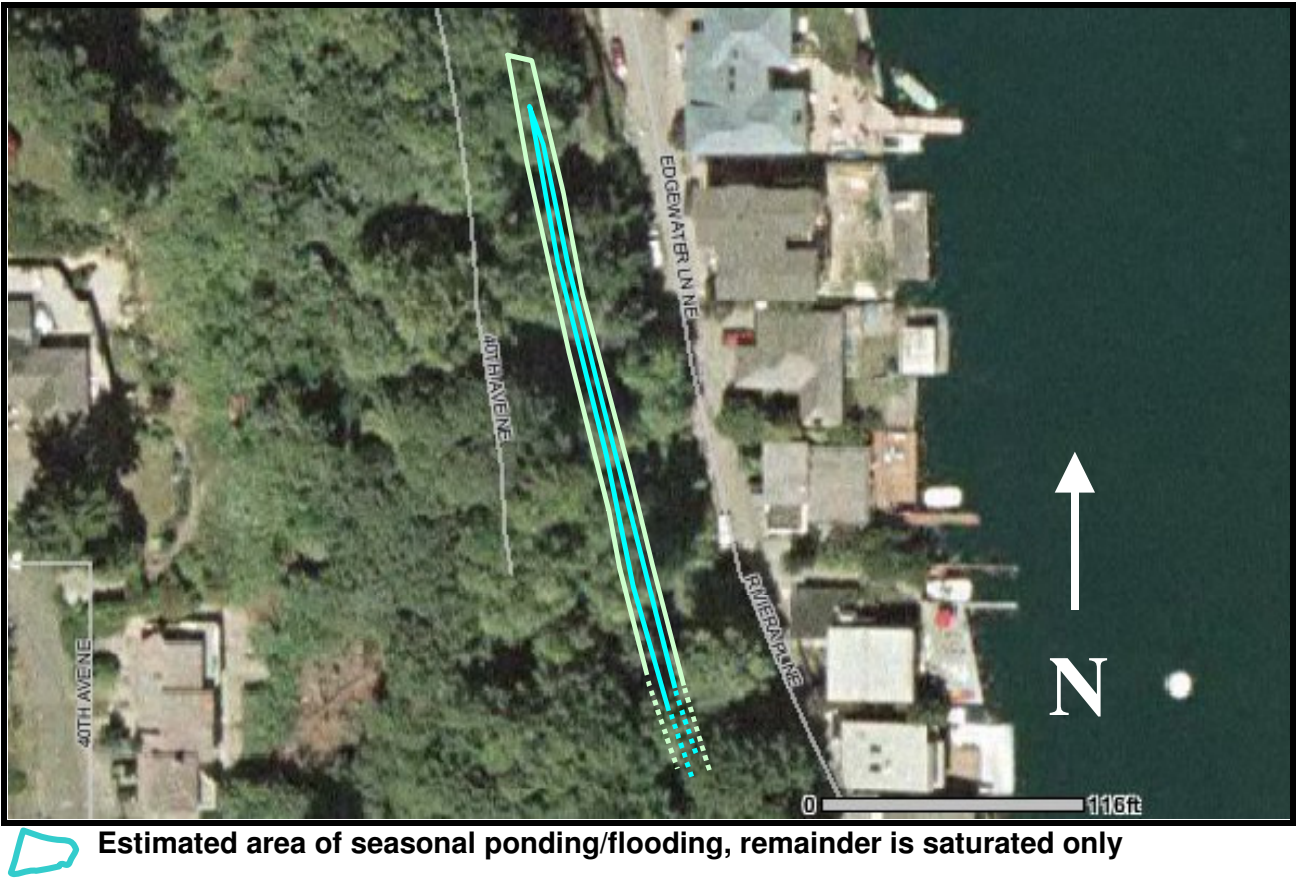


Figure 16 – Aerial Photo Showing Buffers

